COMMISSION OF THE EUROPEAN COMMUNITIES

science and technology policy

Acts published in the Official Journal of the European Communities concerning Community scientific and technical research

1981

EUR 6362 DA, DE, EN, FR, IT, NL

New edition

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(January 1974 to January 1981)

Scientific and Technical Research Committee (CREST)

1981

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New edition

Published by the
COMMISSION OF THE EUROPEAN COMMUNITIES

Directorate-General Information Market and Innovation

Bâtiment Jean Monnet
LUXEMBOURG

This publication is also available in the following languages:

DA ISBN 92-825-2396-9
DE ISBN 92-825-2397-7
FR ISBN 92-825-2399-3
IT ISBN 92-825-2400-0
NL ISBN 92-825-2401-9

Cataloguing data can be found at the end of this publication

Printed in Belgium

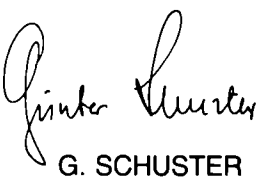
ISBN 92-825-2398-5 Catalogue number: CD-NW-81-002-EN-C

INTRODUCTION

It was only recently, i.e., in January 1974, and after lengthy efforts by the Commission, that the Council of Ministers of the European Communities decided to introduce a common policy in the field of science and technology. Until this time Community research activities had been confined exclusively to the sectors of atomic energy, coal and steel and agriculture; however, in 1973 an initial attempt at diversifying the activities of the Joint Research Centre was made by associating with the nuclear sector other sectors such as protection of the environment, standards and reference substances, solar energy, recycling of raw materials and remote detection of the earth's resources. However, these decisions were not incorporated into any coherent Community policy; it was not until 14 January 1974 that the Council adopted four resolutions, one of which concerned an initial outline programme of the European Communities in the field of science and technology. In a first stage, this programme was aimed at undertaking projects in support of those Community sectoral policies in respect of which a need had been recognized or might be recognized in future. These projects were to be incorporated gradually into the development of the common policy, the general objectives of which are to:

— secure long-term supply in the fields of agriculture, energy and raw materials;
— promote competitive Community economic development at international level (high-technology industries and conventional industries);
— improve Community citizens' living and working conditions (public health, town planning);
— contribute towards protection of the environment and nature.

This collection contains texts relating to the common policy as a whole and those concerning the R & D programmes which have been adopted by the Council since 1974 and which are either being implemented or have not yet formed the subject of a new decision.



G. SCHUSTER

Chairman of the
Scientific and Technical
Research Committee

FOREWORD

This document was drawn up at the request of various delegations to the Scientific and Technical Research Committee (CREST). It incorporates all the decisions, communications or resolutions of the Community authorities relating to scientific research and technological development which have been published in the Official Journal of the European Communities since 1 January 1974.

In view of the special character conferred on it by the Treaty establishing the European Coal and Steel Community, the list in question does not include the decisions taken by the Commission concerning the R & D activities in the fields of coal and steel, except for the overall programmes which have been published in the Official Journal.

Nor is any reference made to the Community projects in the energy sector—particularly hydrocarbons—which benefit from the financial support of the Commission (cf. Regulation No 3056/73 of 9 November 1973), or to the various studies undertaken by the Commission in sectors which may form the subject of scientific and technical activities (the social sciences, for example). Again, there is no reference to the agreements concluded between non-member countries and the Communities, certain articles of which may concern scientific and technical cooperation. Finally, it will be noted that, for the purposes of subsequent updating the texts are presented in chronological order. Nevertheless, in order to facilitate the use of this document a summary table is provided which refers to the texts concerning the subjects dealt with in the various sectors of Community activity in the field of science and technology.

In view of the multidisciplinary nature of the JRC's activities these are consolidated in the table under the general title of 'Joint Research Centre'.

SUMMARY TABLE

No C 7/2 Official Journal of the European Communities 29. 1. 74

COUNCIL

COUNCIL RESOLUTION

of 14 January 1974

on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Communities ;

Having regard to the draft from the Commission ;

Having regard to the Opinion of the European Parliament ;

Whereas the Heads of State or of Government meeting in Paris on 19 and 20 October 1972 expressed their determination to promote the development of a common policy in the field of science and technology and noted that such a policy would require the coordination of national policies within the Community institutions, and the joint implementation of projects of interest to the Community ;

Whereas the Heads of State or of Government meeting in Copenhagen on 14 and 15 December 1973 invited the Community to develop more actively a common policy on industrial, scientific and technological cooperation in all fields ;

Whereas to this end, it is desirable to establish a Committee capable of contributing, through its work and opinions, to the coordination of national policies and the definition of Community projects in this field ;

Whereas if they are to perform these tasks the Community institutions must be provided with the necessary information in the field of science and technology and must possess adequate instruments to assist them,

HAS ADOPTED THIS RESOLUTION :

Article 1

(a) In order to define objectives and ensure the development of a common policy in the field of science and technology involving the coordination of national policies and the joint implementation of projects of interest to the Community the following operations shall be progressively carried out within the Community :

1. the examination and comparison of Member States' national policies in this field, particularly their potential, plans, programmes, projects, budgets, measures and methods in this field ;

2. the identification, analysis and comparison of the objectives of the Member States in order to determine the common goals to be adopted and the appropriate ways and means of achieving them ·

3. the coordination of national policies on the basis of 1 and 2 above with the aim of :

   — eliminating unnecessary or unwarranted duplication of effort in national programmes,

   — avoiding any divergent tendencies which would be contrary to the interests of the Member States,

   — improving the efficiency, or reducing the cost of national and Community projects by sharing of tasks or, possibly, by the concentration of resources or research teams,

   — gradually harmonizing procedures for the formulation and implementation of scientific policies within the Community ;

4. the definition of projects of interest to the Community, taking into account possibilities for participation in some of these projects by non-member countries, particularly European ones ;

5. the selection of appropriate ways and means for implementing these projects ;

6. consultation for the purpose of :

   (i) prior information on the development of and prospects for cooperation between Member States or with non-member countries with a view to the possible harmoniza-

tion or coordination of the attitudes of Member States ;

(ii) seeking as a general rule a common attitude on the part of Member States towards cooperation with or within international organizations.

(b) For the purpose of accomplishing the tasks defined above, Member States shall transmit the necessary information available to the Commission, at the appropriate time and before adopting final decisions at national level, with the exception of information militarily or industrially classified as secret.

The Commission shall ensure that this information is transmitted to the Member States and the Committee referred to in Article 2.

Article 2

A Scientific and Technical Research Committee hereinafter referred to as 'the Committee', is hereby set up for the purpose of assisting the Commission and the Council in performing the tasks which fall to them pursuant to Article 1.

The Committee shall fulfil its functions, either at the request of the Commission or the Council or on its own initiative.

Its reports and opinions may, where appropriate, make mention of minority views. They shall be forwarded simultaneously to the Council and the Commission, together with all documents submitted to the Committee.

The Committee shall define the procedures for communicating the information referred to in Article 1 (b).

Article 3

The Committee shall consist of representatives of the Member States and the Commission.

Article 4

The Committee shall draw up its rules of procedure, which will be submitted for approval by the Council.

The Chairman shall be a Commission representative, and secretarial services shall be provided by the General Secretariat of the Council with the aid of Commission experts for scientific and technical problems.

Article 5

The Working Party on Scientific and Technical Research Policy of the Medium-Term Economic Policy Committee is hereby dissolved. The working parties and committees which are answerable to it shall be taken over by the Committee, which, acting unanimously may, where the need arises, set up other sub-committees.

The procedures established by the ECSC and Euratom Treaties are in no way affected, nor are the powers of the bodies in charge of administering these procedures. The opinions and recommendations of these bodies shall however be forwarded to the Committee.

The tasks assigned to the Working Party on Scientific and Technical Research Policy of the Medium-Term Economic Policy Committee by the Council Resolution of 24 June 1971 (1) on scientific and technical information shall be carried out by the Committee.

Article 6

The Council approves, as a working basis, the outline programme and timetable of work appearing in the Annex and covering the 1974 to 1976 phase, which will make it possible to try out methods of comparison, consultation, definition and implementation of projects and of formulation of opinions and recommendations addressed to the Member States by Community Institutions relating to national policies in the field of science and technology.

In the course of 1976, conclusions will be drawn from the experience gained during this first phase, with a view to evaluating the effectiveness of the procedures tested, perfecting their machinery and determining the guidelines for a common policy in the field of science and technology, so as to facilitate the Commission's task in drawing up its proposals for the second phase.

(1) OJ No C 122, 10. 12. 1971, p. 7.

ANNEX

WORK PROGRAMME AND TIMETABLE

1st phase : 1974 to 1976

1974 : — Setting-up of the 'Scientific and Technical Research Committee',

— Setting-up of an initial group of sub-committees using existing committees where possible ;

— Invitation to the Member States to designate the national bodies authorized to supply the appropriate information to the Commission and, through the latter, to the Committee and to the sub-committees (general data on national policies and sectoral information) ;

— Gradual development of comparison of national and Community potential, plans, programmes, projects, budgets, measures and methods ;

— Implementation of Community consultation procedures concerning cooperation, in the scientific and technological field with non-member countries or international organizations ;

— First examination of available information and guidelines on draft national budgets for science and technology ;

— Examination of draft programmes of interest to the Community, in particular those appearing in the outline programmes submitted by the Commission, and formulation of relevant suggestions ;

— Participation in the work of reviewing the multi-annual research and training programme.

1975 : — Extension of the procedures for comparing national potential, plans, programmes, projects, budgets, measures and methods. Setting-up of a second group of sub-committees ;

— Trial systematization of the examination of draft national science and technology budgets ;

— Trial synchronization of planning procedures at national and Community level ;

— Study on the setting-up of a 'Scientific and Technological Policy' data bank, forming the link with the correspondents in the Member States for the information system ;

— Examination of projects of interest to the Community.

1976 : — Further setting-up of the necessary sub-committees ;

— Further work within the Committee's terms of reference ;

— Drafting of a report on the experience gained, the effectiveness of the procedures adopted, and the suggestions for improving machinery, with a view to enabling Community Institutions to determine the guidelines for a common scientific and technological policy.

COUNCIL RESOLUTION

of 14 January 1974

on the participation of the European Communities in the European Science Foundation

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaties establishing the European Communities;

Having regard to the draft from the Commission;

Having regard to the Opinion of the European Parliament;

Whereas at the Paris Conference on 19 and 20 October 1972 the Heads of State or of Government expressed their resolve to define objectives and ensure the development of a common policy in the field of science and technology; whereas, to this end, it is necessary to coordinate national policies;

Whereas a European Science Foundation is in the process of being set up by the research councils and academies of European States, including the nine Member States of the European Communities;

Whereas the creation of such a Foundation would seem to be an effective way of stimulating European cooperation and providing an answer to the questions arising in connection with basic research,

HAS ADOPTED THIS RESOLUTION:

1. The Council notes with interest the planned creation of a European Science Foundation and also the fact that the Commission has been invited to take part in the activities of the Working Party instructed to draw up the statutes of this Foundation.

2. The Council hereby records a favourable attitude to the establishment of links between the Foundation and the European Communities. At the close of the preparatory work for the setting up of this Foundation, the Council, acting on a proposal from the Commission, will decide on the nature and the form of such links.

COUNCIL RESOLUTION

of 14 January 1974

on an initial outline programme of the European Communities in the field of science and technology

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaties establishing the European Communities ;

Having regard to the draft from the Commission ;

Having regard to the Opinion of the European Parliament ;

Whereas a common policy in the field of science and technology is likely to contribute to social progress, to balanced economic expansion and to an improvement in the quality of life ;

Whereas the development of this common policy implies that the Community institutions will carry out a periodic examination of prospects and priorities, as well as the proposals submitted by the Commission in the field of science and technology, and determine objectives and programmes, and allocate the necessary means ;

Whereas the Heads of State or of Government, meeting in Paris on 19 and 20 October 1972, expressed their resolve to define objectives and ensure the development of a common policy in the scientific and technological field ; whereas, to this end it is necessary to coordinate national policies within the Community institutions and to implement jointly projects of interest to the Community ;

Whereas the Heads of State or of Government meeting in Copenhagen on 14 and 15 December 1973 invited the Community to develop more actively a common policy on industrial, scientific and technological cooperation in all fields,

HAS ADOPTED THIS RESOLUTION :

1. The Council notes with interest the programme submitted by the Commission, in the initial phase of which it proposes to undertake projects in the field of science and technology in support of those sectoral policies of the Communities for which a need for research has been recognized or may be recognized in the future.

2. The Council also notes with interest the Commission's intention to submit proposals for projects relating to scientific and technical information, tasks connected with public service, and scientific and technical services.

3. The Council however emphasises that, with the exception of matters militarily or industrially classified as secret, no sphere of action in the field of science and technology should be excluded *a priori*.

4. The Council welcomes with interest the Commission's intention to submit as soon as possible, after consultation of the Scientific and Technical Research Committee, specific proposals for projects, drawn up on the basis of the outline programmes submitted by the Commission and designed to support the sectoral policies of the Communities.

   This will not prevent the Council from examining other proposals for projects which might be submitted to it at a later date and from taking the necessary decisions on them. To this end, among other things, optimum use should be made of the work already done by the Working Party on Scientific and Technical Research Policy.

5. The Council undertakes to act on the proposals from the Commission within a period of nine months from the date of their submission.

6. The Council considers that the various research programmes currently being carried out within the Communities and the various projects to be undertaken in the future should be gradually integrated in the development of the common policy referred to by the Paris Summit.

7. The Council emphasises that :

   (a) the choice of projects to be undertaken should be dictated essentially by the desire to fulfil the objectives of the Communities and to meet their overall socio-economic needs in order to contribute to the development of a common policy on science and technology ;

   (b) an appropriate approach should be adopted towards the whole range of available ways and means : direct projects, indirect projects, joint projects etc., in an effort to ensure maximum effectiveness while endeavouring to obtain a fair allocation of tasks among the laboratories and research bodies in the Communities and the Member States ;

   (c) whenever it proves necessary or desirable that non-member countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible, the Council taking the decisions required to this end.

COUNCIL RESOLUTION

of 14 January 1974

on a programme of research as an instrument of forecasting, assessment and methodology in the European Communities

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaties establishing the European Communities ;

Having regard to the draft from the Commission ;

Having regard to the Opinion of the European Parliament ;

Whereas the Heads of State or of Government meeting in Paris on 19 and 20 October 1972 expressed their resolve to define objectives and ensure the development of a common policy in the field of science and technology ;

Whereas the programme which is the subject of this Resolution is a necessary element for defining the long-term action of the Communities and ensures technical backing for future decisions of Community Institutions in the scientific and technological field,

HAS ADOPTED THIS RESOLUTION :

The Council hereby approves the programme, which will have a duration of one year, as set out in the Annex hereto, which Annex forms an integral part of this Resolution.

The Council takes note of the fact that the Commission proposal is no more than a preliminary experimental programme and that the Commission intends to submit specific proposals in the near future on the basis of the results of this preliminary programme, and with the assistance of the Scientific and Technical Research Committee.

ANNEX

ACTION PROGRAMME

AS REGARDS FORECASTING, ASSESSMENT AND METHODOLOGY

In order to ensure the development of a Community policy in the scientific and technological field the European Communities must try to determine how existing scientific and technological capacity can best be used for the purpose of keeping the objectives and instruments of a common policy under constant review. The guidelines given by the Paris Summit Conference make long-term forecasting, an attempt to 'check research by research' and a study of the effects of scientific and technological development on society and the economy, particularly necessary.

In order to achieve the aims set out hereunder it is proposed to initiate a preparatory phase (preliminary experimental programme) during which an attempt will be made to determine to what extent, by what means and according to what timetable the European Communities will be able to contribute to solving these problems. The preparatory phase will be limited to one year ; it will not prejudice any future decisions.

The object of the preparatory phase is to provide answers to two specific questions :

1. In the context of the common scientific and technological policy, should the European Communities undertake a majority study entitled 'Europe plus 30' (1) concerning the foreseeable or possible developments over the next thirty years, which are likely to affect the progress of Europe ; and, if so, will this study make it possible in particular to create a forecasting instrument which can be constantly updated ?

   If the answer were 'yes', it would be necessary to define, with the help of an analytical table of the studies and forecasts already carried out :

   — the method or methods to be used ;

   — the characteristics which define the content, i.e. :

      — the limiting conditions ;

      — the areas to be included ;

      — the structure of the study ;

      — the implementing procedures.

   If the answer were 'no', it would be necessary to define the possible alternatives to aid in effective decision-making, in the field of research and technological planning.

2. Should the European Communities create their own Technology Assessment Office in an attempt to evaluate in advance the effects of scientific and technological development on the society and economy of the Community ?

   If the answer were 'yes', it would be necessary to define, with the help of an analytical table of organizations and institutes and of work which has been carried out :

   — the institutional structure of the European Technology Assessment Office and its relationship with the Community Institutions ;

   — the way in which this office could be integrated into the Communities' planning and decision-making processes ; and

   — the way in which the creation of a new centralized organization could be avoided by making use of existing organizations where possible.

   If the answer were 'no', it would be necessary to determine what other possibilities were available to the Community for carrying out the task of technological assessment.

ACHIEVEMENT

The Commission will assume responsibility for carrying out the project as efficiently as possible. In order to have access to outside expertise, the Commission may employ experts on a contractual basis.

(1) The study of the relevant questions will be carried out in cooperation with the European Foundation for the Improvement of Living and Working Conditions which it is proposed to set up.

The duration of the project shall not exceed one year from the date on which the first contracts are signed.

MEANS

The maximum cost of this preparatory phase is estimated at 500 000 u.a. (including expert assistance, possible mission expenses and any complementary studies carried out outside).

COMMISSION

MEDIUM-TERM RESEARCH AID PROGRAMME (1975 to 1980)

(under Article 55 ECSC)

All enterprises, research institutes and individual persons wishing to engage in research within the meaning of Article 55 of the ECSC Treaty may make application to the Commission of the European Communities for the grant of financial assistance.

Such applications must relate to fields of research specified in the medium-term assistance programme reproduced as Part A of this Communication. Upon receipt, applications will undergo selection by the Commission, which will bear in mind the need to ensure that financial expenditure is concentrated upon research projects which best satisfy the criteria of this medium-term programme.

Applications should be submitted before 1 September of each year in order to be effective in the following year.

Medium-term research aid programme (1975 to 1980)

Article 55 of the Treaty concerning the establishment of the European Coal and Steel Community specifies that the Commission of the European Communities shall foster technical and economic research relating to the production of coal and the advancement of its consumption and also to safety in the coal industry. For this purpose the Commission is required to organize appropriate collaboration between existing research centres.

The first action of the ECSC was to lay the foundations of collaboration between research workers and coalmining undertakings in the Community countries by providing for the necessary contacts. Since 1957 the High Authority of the ECSC has granted financial assistance to the coalmining industry with the object of giving a new stimulus to coal research.

In 1963 the High Authority of the ECSC, in its document entitled 'Research Policy' (ECSC Bulletin No 41, 1963), made known the principal areas of research which it proposed to support. In 1967 the High Authority produced its first medium-term assistance programme as an instrument of policy in the field of coal research and this was submitted to the Council of Ministers in 1968 by the Commission of the European Communities (CEC). Based on a systematic catalogue of all fields of coal research, there has been set up, in 1970, a second Medium-term Assistance Programme for the years 1970 to 1974 (revised 1972). This programme was submitted to the Council of Ministers, and has also been published in the *Official Journal of the European Communities* (No C 99 of 31 July 1970 and No C 74 of 10 July 1972).

The position of coal in the actual energy situation makes research efforts more urgent in that it resulted within a reasonable period in important economic and social advances. The current research programmes demonstrate this. The research effort must therefore be continued and intensified, the most advantgeous fields being of course selected.

With the exception of lignite, the coalmining industry of the Community is, it is true, characterized by higher production costs than that of many other countries; on the other hand, as a source of energy obtained within the Community, coal represents a certain factor in regard to security of supply, principally for the steel industry and electricity generation. The coalmining industry thus has three objectives:

— to improve production costs, in particular by raising productivity;

— to improve the processing and utilization of the products of coalmining;

— to improve working conditions and safety, as well as the protection of the environment.

These are also the objectives of the coal research activities and projects supported by the CEC.

In view of the rapid development of technology and the various factors and circumstances arising from the present situation of the coalmining industry and bearing in mind the general Community research policy and the energy situation in the Community, the CEC has decided to set up a new medium-term assistance programme for research under Article 55 of the ECSC Treaty.

The aim of this new medium-term assistance programme for research is:

— to concentrate effort on these fields in which concrete results will most quickly be obtained;

— to harmonize research work;

— to facilitate the identification of those applications for assistance which relate to essentially practical developments;

— to select the most important projects for financial support from the CEC.

This medium-term programme has been drawn up by the CEC departments working in collaboration with the Coal Research Committee (CRC). This Committee, which consists of representatives of coal producers, coal research institutes, universities and trade unions throughout the Community, was set up by the CEC with the task of providing expert advice in the research field.

The programme was prepared in three stages:

— actualization of the systematic catalogue of research fields, subdivided into groups:

— revision of criteria for deciding the relative importance of the different fields and groups;

— selection of fields from the catalogue on the basis of the criteria thus determined.

The systematic list contains the most important fields in which coal research could be undertaken, is planned or is already in progress. There are nineteen fields, subdivided into the following five sectors:

— mining engineering;

— mine management;

— processing;

— coal utilization;

— environmental pollution.

The list of the nineteen fields is shown below, broken down into the various sectors.

SECTORS AND FIELDS

A. OPERATIONS UNDERGROUND

I. Coal measures.

II. Development work.

III. Methane studies, climatic problems, rock pressure and supports.

IV. Methods of working and techniques of coal-getting.

V. Outbye services underground.

VI. Telecommunication, monitoring, remote control and automation.

VII. Safety and accident prevention.

VIII. New technology.

B. OPERATIONAL MANAGEMENT AND PLANNING

I. Organization and management.

II. Planning and control of operation.

C. PRODUCT BENEFICATION

I. Mechanical coal preparation.

II. Coking and briquestting of coal.

III. New chemical and physical processes.

D. UTILIZATION OF COAL

I. Electricity generation.

II. New fields of utilization.

III. Marketing.

E. HARMFUL EFFECTS (ENVIRONMENTAL)

I. Measures against air pollution.

II. Water purification.

III. Noise control.

The criteria adopted are:

— the aims of the energy policy and general research policy of the Community;

— the value of the research, i.e. the increase in productivity and profitability which it will offer the industry, and also its effects upon working conditions, safety and environmental protection;

— the interest of the Community in the research;

— the probable date of completion of the research and its application in practice.

On the basis of these criteria the medium-term programme will consist of the following nine fields. There appears to be no purpose in arranging them in order of priority.

OPERATIONS UNDERGROUND (SECTOR A):

— development work;

— methane studies, climatic problems, rock pressure and supports;

— methods of working and techniques of coal-getting;

— outbye services underground;

— telecommunication, monitoring, remote control and automation.

OPERATIONAL MANAGEMENT AND PLANNING (SECTOR B):

planning and control of operation.

PRODUCT BENEFICATION (SECTOR C):

— mechanical coal preparation;

— coking and briquetting of coal;

— new chemical and physical processes;

It is pointed out that technical matters relating to safety and working conditions, will be considered in the fields adopted, especially in those concerned with underground operations. Problems relating to environmental protection will be considered in the field concerned, and more particularly in that of coal processing. The reason for not entering fields A VII and E explicitly into the medium-term assistance programme is, that the problems of environmental protection and of security are very closely connected with all techniques and technologies to be developed, and that research projects not sufficiently taking into account the invironmental protection have no chance of being carried out. In addition, one will find the groups of section E, and particularly of fields E I and E II, in the other groups of the chosen fields (C I, C II, C III). This may demonstrate the actual importance of environmental protection. In addition, the necessity to harmonize the investigations with other research in the sphere of safety, hygiene and operational medicine, which is also financed by the ECSC, will be borne in mind. This research covers principally the fields of environmental pollution, health and safety (1).

On the basis of the abovementioned criteria the fields of research have selected with the following considerations in mind:

— improvements in the operating results of the mines and in productivity can be achieved by concentrating mining operations, both in space

(1) A medium-term programme will be established for the social research and will show, in detail, the research fields concerned.

and in time, into very high production units and coal-faces. The fields of development work, of natural influences underground, working methods and techniques, outbye services underground, remote control and automation and also planning and control of operation, have for this reason been included in the programme;

— these fields are of great significance in regard to mine safety. It is found that falls of ground and of coal in the face cause the majority of accidents, together with transport.

— the market position demands research in the field of coal processing and this research should be concentrated upon coal preparation, coking and briquetting, in particular in widening the range of types of coal suitable for coking, improving coke quality, increasing the capacity and profitability of coking plant and discovering new uses for coal and dirt.

The medium-term assistance programme for coal research will operate for a period of six years. To the extent that conditions in the mining industry demand and having regard to the rapid progress of technical developments, it can be re-examined later on.

The medium-term programme is shown below, subdivided by fields and groups and complemented by notes on projects and subjects.

A. OPERATIONS UNDERGROUND

Sector	Field	Group	Designation	Notes
A	II		**Development work**	
		1	Conventional methods of driving roadways	Technique of drilling, shotfiring and removal of material.
		2	Fully mechanized driving of roadways	Heading machines which take the full section. Selective heading machines Mechanization of supports. Transport problems related to driving of roadways. Integration of the equipment and organization of the work. Automation of heading machines.
		3	New methods for rock-cutting	
		4	Large hole drilling	
		5	Sinking by boring	
		6	Cutting machines for very short faces	
		7	Mechanized driving of riseheadings (cross cuts)	
		8	Technical problems of ventilation	Improvement of climate and measures against methane and dust.
		9	Technical problems arising from roof pressure and strata supports	
A	III		**Methane studies, climatic problems, rock pressure and supports**	
		1	Presence, movement and release of methane	

Sector	Field	Group	Designation	Notes
A	III	2	Degassing of seams and drainage	Development of methods of methane drainage. Pre-infusion from a distance.
		3	Mine climate	
		4	Valorization and utilization of methane	Underground storage of methane. Recovering methane from closed pits and old workings.
		5	Ventilation: (a) Measuring appliances (b) Techniques (c) Prediction and calculation (d) Auxiliary ventilation	Use of analogue models. Control of methane emission on high performance faces.
		6	Rock mechanics	Applied rock mechanics Formation of breaks and cleavages.
		7	Rock pressure and supports: (a) Stone drifts (b) Gateroads (c) Face (d) Face-ends (e) Other excavations	Strata bolting.
		8	Roof and floor control in various geological and working conditions	
		9	Preventions of rockbursts and bumps	
		10	Powered supports	Adapting to various geological conditions and methods of winning. Remote control and automation.
		11	New support systems: (a) Face (b) Roadways (c) Face-ends	Shield supports, etc.
		12	Special problems relating to production in: (a) Thick seams (b) Steep seams	

Sector	Field	Group	Designation	Notes
A	IV		**Methods of working and techniques of coalgetting**	
		1	Workability of coal	
		2	Winning in fully mechanized places:	
			(a) Cutting machines and ploughs	Improving equipment for controlling machines.
			(b) Powered supports	Adapting to various winning conditions.
			(c) Face conveyors	Development and application for transport of equipment.
			(d) Stowing and caving	Mechanization and remote control.
			(e) Face crushers	
		3	Fully integrated mechanized systems of production	Problems of face-ends. Elimination of idle time. Programming individual processes and face operations. Remote control and automation in the face. Development of high power machines requiring little maintenance and repairs.
		4	Special problems of working:	
			(a) Semi-steep seams	
			(b) Steep seams	
			(c) Thin seams	
			(d) Thick and very thick seams	
		5	New methods of winning	By hydromechanical methods. By auger mining in level seams. In steep seams. In thick seams.
		6	Technical problems of ventilation	Ventilation, improvement of climate and measures against methane and dust.
		7	Technical problems arising from rock pressure and strata supports	
A	V		**Outbye services underground**	
		1	Manriding	
		2	Transport of products and material	
		3	Mechanized loading points	
		4	Automation of main haulage	

Sector	Field	Group	Designation	Notes
A	V	5	New transport systems	Monorails. Conveyor trains (Couloirs-roulants). Tyred vehicles, etc.
		6	Power supplies for underground operations	Higher voltage supplies. Cylindrical transformer, etc. Fire resistant liquids.
		7	Research and analysis on dynamic deformations in shafts	
A	VI		**Telecommunication, monitoring, remote control and automation**	
		1	Telemetry	
		2	Monitoring systems	Perfection and development of mine control centres. Monitoring equipment for underground electricity networks, etc.
		3	Remote control	Including interlocking systems for conveyors.
		4	Programmed control of individual methods of working and their equipment	
		5	Optimization of integrated processes and operations	Ventilation. Reliability of electronic equipment.
		6	Automation	For example, main haulage systems. Ventilation.

B. OPERATIONAL MANAGEMENT AND PLANNING

Sector	Field	Group	Designation	Notes
B	II		**Planning, organization and control of operations**	
		1	Reduction in time of workings and pits and improvement of the rate of utilization of the machines	Elimination of idle time. Treatment of data received at the control centre.
		2	Improvement of ratio between nett and gross output	
		3	Problems relating to the structure underground and at the surface	Simplification of the structure. Improvement of knowledge on interdependence of services. Improvement of cost system. Studies of underground and surface services.

Sector	Field	Group	Designation	Notes
B	II	4	Assessment of coal reserves including brown coal	
		5	New planning techniques — integrated planning systems	
		6	Mathematical models	Selection of haulage methods.
		7	Optimization of underground workings	Cross-section of roadways, layout of districts, face and roadway operations.

C. PRODUCT BENEFICATION

Sector	Field	Group	Designation	Notes
C	I		**Mechanical coal preparation**	
		1	Properties of raw coal and treated products	Evaluation of parameters measurable quantitatively.
		2	Stockpiling and homogenization	
		3	Mechanism of the mechanical treatment process	Reduction of proportion of smalls and finest material by gentle crushing of grades sizes.
		4	Development of conventional techniques for coal preparation	Treatment of fines (flotation). Development of vacuum filtration.
		5	Development and introduction of new methods	Electrostatic and pneumatic processes.
		6	Control of the process	Control systems. Automatic rapid methods for determination of ash, moisture and sulphur content. Relation between parameters quantitatively measurable and parameters of uncontrolled techniques (i.e. not directly measurable).
		7	Desulphurization of the coal	
		8	Waste disposal	

Sector	Field	Group	Designation	Notes
C	II		**Coking and briquetting of coal**	
		1	Properties of coking coals and carbonization products	Automatic sampling and continuous preparation of samples. Evaluation of parameters measurable quantitatively. Evaluation of qualities of coals, e.g. size distribution of coke produced. Widening of the coking coal basis.
		2	Mechanism of coking (pyrolysis)	Pyrolysis under extreme conditions. Quantitative research on behaviour of coal swelling in coke ovens.
		3	Development of conventional coking techniques:	
			(a) New methods of research	Determination of swelling pressure of coals. Thermal studies on regenerators of coke oven batteries.
			(b) Increased capacities and the productivity of coke oven batteries	Charging pre-heated coking coal. Blending charges. Refractory material allowing a reduction in the width of the stretchers (wall thickness), i.e. bricks. Increasing the temperature of the flues.
			(c) Mechanization and automation of the processes	
			(d) Manufacture of foundry coke	
		4	Thermal balance and process control	Optimization of oven heating. Reduction of heat required for coking. Influence of higher temperatures of walls (arches) on quality of coke, swelling and productivity. Relation between the parameters (see part C I b) and the variable technical parameters. Determination of temperature/time relationship.
		5	Production and benefication of by-products and coking gas	Increasing the yield of simple aromatics from coal tar. Benefication of complex aromatics from coal tar for utilization in the chemical and plastics industry.
		6	New methods of coking for coal	Continuous coking process of smalls and fines for the production of formed coke.
		7	New methods of briquetting brown coal	Based on rough coal, dried coal and small coke.

Sector	Field	Group	Designation	Notes
C	II			
		8	Methods of manufacturing smokeless briquettes from coal	
		9	Technical and economic problems in environmental protection	Measures against emission during charging and discharging the ovens.
C	III		**New chemical and physical processes and products from coal**	
			(a) *Fundamental research for new chemical and physical processes*	
		1	Chemical constitution of coal	Studies of coal constitution and reactions involved in processing.
		2	Petrographic methods of analysis	Classification. Physical and chemical constitution; properties of petrographic constituents. Use in process control.
		3	Physical properties of coal	Physical properties as they affect the processing of coal.
		4	High intensity chemical reactions	High temperature and/or pressure reactions in pyrolysis, gasification, hydrogenation, etc.
			(b) *New products and processes from coal*	
		1	Gasification	Pressure gasification. High and low calorific value gas. Utilization of heat from nuclear reactors.
		2	Production and benefication of hydrogen from coke oven gas and other gases	Hydrogenation using coke oven gases.
		3	Dissolving coal and extracting constituents	Conversion of extraction constituents into high value materials, e.g. electrode cokes, carbon fibres.
		4	Hydrogenation and hydrocracking of coal, extraction products and tar aromatics	Production of hydrocarbons for chemical and plastics industries.
		5	Oxidation of coal, coal extracts and coal tar fractions	Production of chemicals containing carboxyl groups, etc.
		6	Adsorption agents from coal	Activated carbons and coals for the purification of gaseous and liquid effluents.
		7	Electrode coke and reducing agents from coal	Special cokes with properties adapted to market requirements, e.g. for metallurgical and electrochemical industries.

Sector	Field	Group	Designation	Notes
C	III	8	Building and other materials from coal and shale	Cement from flotation waste, road-building materials, lightweight aggregates.
		9	Improved methods of combustion and utilization of heat	New and improved combustion methods. Combined cycles for power generation. High pressure methods. Plasma physics.
		10	Microbiological treatment of coal	Production of protein.
		11	Technical and economical problems in environmental protection	New techniques and improvement of processes aimed at reducing noxious emissions.

I

(Acts whose publication is obligatory)

REGULATION (EEC) No 1728/74 OF THE COUNCIL
of 27 June 1974
on the coordination of agricultural research

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 43 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament;

Whereas effective coordination of research in agriculture should have as its aim the best possible organization, in the general interest, of the efforts made in the Member States, effective use of the results of these efforts, orientation of them in such a way that they are consistent with the needs of the common agricultural policy, and the pooling of research facilities with a view to studying certain problems of particular importance to the Community;

Whereas in order to achieve this aim, it is necessary to make provision for exchanges of information and reciprocal consultation on the programmes of agricultural research already existing or envisaged in the Member States;

Whereas in a certain number of cases the desired objective may be attained through coordination at Community level of certain national research projects;

Whereas, however, these measures may appear insufficient either because of their nature, or because the means available to the Member States do not allow them to increase their research efforts in such a way as to fulfil the requirements of the common agricultural policy entirely; whereas in these cases, the Community should be able to support and supplement the efforts made in the Member States in order to meet research requirements more effectively and to fulfil the needs of the common agricultural policy;

Whereas since the coordination of agricultural research is closely linked to the common agricultural policy, and since, as a result, efforts are concentrated especially on coordinating applied research, the earliest possible utilization by farmers of the results of this research must be ensured;

Whereas, because of the needs of coordination and as a result of the complexity of the scientific problems to be studied and the projects to be implemented, direct and continuous cooperation between the Commission and the Member States is desirable;

Whereas within the framework of the general policy in the field of science and technology worked out by the Commission with the help of the relevant consultative bodies, the most appropriate way of developing cooperation is to set up a Committee consisting of representatives of the Member States and presided over by a representative of the Commission which could usefully help and advise the Commission in carrying out the tasks which devolve upon it in the field of the coordination of research in agriculture;

Whereas the coordination of national efforts demands a thorough knowledge of the situation in each Member State so far as agricultural research is concerned as well as sufficient information on other research relevant to agriculture; whereas it is necessary to determine the procedure whereby the data so obtained will be made available to the users;

Whereas care must be taken to put the results of research in which the Community takes part at the disposal of the Community;

Whereas in order to ensure practical application of the results obtained, it is necessary to promote the publication and dissemination of the results,

HAS ADOPTED THIS REGULATION :

Article 1

1. In order to further the attainment of the aims of the common agricultural policy, coordination and promotion at Community level of agricultural research activities undertaken in the Member States shall take place in accordance with the provisions laid down in this Regulation.

2. In applying this Regulation account shall be taken, in a suitable manner, of the general scientific and technological policy laid down by the Community's institutions.

TITLE I

Information and consultation

Article 2

A system of information and consultation between the Member States and the Commission shall be set up in accordance with the provisions of Articles 3 and 4.

Article 3

1. The Member States shall provide the Commission with scientific, economic and financial information concerning agricultural research activities either planned or being carried out under their authority.

They shall endeavour to provide the Commission with the same information concerning agricultural research activities planned or being carried out by bodies which do not come under their authority.

2. The Commission shall keep a permanent inventory of the activities referred to in paragraph 1.

3. After consultation with the Committee referred to in Article 7, the Commission shall determine the ways in which the information collected, particularly that resulting from the permanent inventory provided for in the paragraph 2, shall be made available to the interested parties.

Article 4

1. The Commission shall constantly examine the major trends and developments in agricultural research in the Member States. To this end, it shall establish consultations with the Member States within the Committee referred to in Article 7.

2. The Commission shall organize exchanges of information particularly in the form of seminars, exchanges of research workers, study trips and the use of scientific expertise.

TITLE II

Specific measures

Article 5

1. Without prejudice to any recommendations the Commission may make to Member States, the Council, acting in accordance with the procedure laid down in Article 43 of the Treaty, shall decide upon :

(a) the coordination at Community level of certain national research activities so as to allow rational organization of means employed, efficient use of results and the orientation of such work towards the aims of the common agricultural policy ;

(b) the implementation of joint projects designed to second or supplement work undertaken in the Member States in fields which are of particular importance to the Community.

2. Detailed rules for the application of paragraph 1 shall be adopted in accordance with the procedure laid down in Article 8.

Article 6

1. After consulting the Committee refered to in Article 7, the Commission shall take the necessary steps to make the results obtained pursuant to Article 5 (1) available to the Community.

2. The Commission shall take the necessary measures to promote the dissemination of the scientific results likely to further the attainment of the aims of the common agricultural policy and in particular the results of the projects referred to in Article 5 (1) (b).

TITLE III

General and financial provisions

Article 7

1. A Standing Committee on Agricultural Research, hereinafter referred to as the 'Committee', shall be established, consisting of representatives of Member States and presided over by a representative of the Commission.

2. The Commission shall ensure the necessary harmony between the activity of the Committee and that of the Scientific and Technical Research Committee.

3. The Committee shall draw up its rules of procedure.

Article 8

1. Where the procedure laid down in this Article is to be followed, the Chairman shall refer the matter to the Committee either on his own initiative or at the request of the representative of a Member State.

2. Within the Committee the votes of Member States shall be weighted in accordance with Article 148 (2) of the Treaty. The Chairman shall not vote.

3. The representative of the Commission shall submit a draft of the measures to be taken. The Committee shall deliver its Opinion on such measures within a time-limit to be set by the Chairman according to the urgency of the questions under consideration. An Opinion shall be adopted by a majority of 41 votes.

4. The Commission shall adopt measures which shall apply immediately. However, if these measures are not in accordance with the Opinion of the Committee, they shall forthwith be communicated by the Commission to the Council. In that event the Commission may defer application of the measures which it has adopted for not more than one month from the date of such communication

The Council, acting in accordance with the voting procedure laid down in Article 43 (2) of the Treaty, may take a different decision within one month.

Article 9

The Committee may examine any other question referred to it by its Chairman either on his own initiative or at the request of the representative of a Member State.

Article 10

Where Article 5 (1) is invoked, the Council, acting in accordance with the procedure laid down in that paragraph, shall decide on the financial contribution of the Community.

Article 11

At regular intervals the Commission shall present to the European Parliament and to the Council a report on the coordination of agricultural research.

This report shall contain in particular:

— information on the national organization of agricultural research;

— an overall picture of developments in agricultural research within the Community;

— a progress report on the measures adopted under this Regulation;

— a forward study of developments which would be desirable in agricultural research in the Member States and in the coordination of that research at Community level, with reference to the aims of the common agricultural policy.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Luxembourg, 27 June 1974.

For the Council

The President

K. GSCHEIDLE

COMMISSION

ESTABLISHMENT OF A THIRD RESEARCH PROGRAMME ON

'Technical control of pollution in the iron and steel industry'

I

INTRODUCTION

1. Review of previous programmes

The second programme of research on the combating of air pollution in the iron and steel industry by technical means decided upon by the High Authority of the ECSC on 26 June 1967 will expire in 1973 after the credits granted for a term of five years have been used up.

In a recent pamphlet entitled 'Combating air pollution in the iron and steel industry by technical means' (1), the Commission of European Communities reported briefly on the state of the research up to 30 June 1972, and more particularly demonstrated how the basic programme had influenced the field of research.

The distribution of credits shows that even though the basic aspects of research into the physics and nature of the pollutants have not been neglected most of the research work has been directed towards means of countering the emission of air pollutants from the various sectors of the iron and steel industry.

Without going into detail about what has been achieved, the following items can be quoted as examples:

With regard to the measurement of pollutants, both inside iron and steel works and in their immediate vicinity, action has been taken to improve and harmonize techniques. Various measures have been taken at a number of industrial sites with, or without, coke-oven plant. In addition, research has been continued on instruments for the continuous recording of pollutant emission.

A preliminary research project has studied the process of rapid oxidation of sulphurous anhydride in the presence of iron oxide.

The fight against emissions of brown fume which started in 1958 with the first research programme and research outside the programme (2) has been continued with work aimed mainly at improving the efficiency of dedusting devices and making them simpler and smaller.

In particular, experiments have been made on the technique of dedusting oxygen converter gases before combustion either by wet or electrostatic scrubbing.

Research on dedusting in electric and OH steelworks has been conducted.

In addition, research work has been carried out on improving the atmosphere at the working positions in sinter plants, on the elimination of solvents in coated sheet manufacture, the rendering of welding positions more hygienic, etc.

One small part of the programme is concerned with problems of filtering pollutants at temperatures of up to 500°C and another with individual means of protection for workers against dust and gases.

Although the attention of the industrial work has long been centred on the pollutant emissions of coke-oven plants, the present programme is not able to count on any decisive progress in this field. At the end of the programme, one piece of research was commenced, after another had had to be

(1) Publication No EUR 4921.

(2) See publication 'Combating atmospheric pollution in the iron and steel industry by technical means', June 1968, Office of Official Publications of the European Communities, No 15 444.

interrupted, aimed at the elimination of emissions caused by the discharging of coke, and escaping from badly-fitting doors on coke-ovens.

Research work was also started at the end of the programme to investigate the catalytic reduction of nitrous vapours, the proper installation of ventilation in steelmaking shops and the elimination of pollutants, hygienic conditions for grinding and scarfing.

2. Drawing up a new programme

The results of research work stimulated by present and previous programmes are tangible and real and a good number have passed into current practice in a relatively short time. The combined efforts of the iron and steel industry and the ECSC have, thus, succeeded in reducing to an extent, especially in new works, the volume of pollutant emissions for which the iron and steel industry is responsible.

However, it cannot be said that the progress achieved, even though it is considerable, is enough. This, it would appear, is mainly due to three things:

— certain problems have still not been solved properly either from a technical or an economic point of view;

— certain problems are new or arise from the development of production processes whose effects are not yet fully known or result from the development of our knowledge of the dangers caused by industrial rejects or waste;

— certain treatments for emissions constitute sources of secondary pollution.

Up to the present, the research programmes promoted by the ECSC have taken into account only the problems caused by combating 'atmospheric pollution'. However, this has resulted in incomplete solutions from the point of view of the elimination of industrial nuisances.

Very often, when waste gases are scrubbed, the solid particles eliminated from the gas are met again in the form of sludge, and, as with many gaseous components of waste gases, in a dissolved state in the waste water. This is tantamount to a 'transfer' of pollution from air to water, and waste water should therefore be mechanically, chemically, physically or biologically processed before it is rejected or recycled. Thus, it appears logical to include research into the problem of industrial pollution of water and its treatment, or processing, in a new programme.

In this connection particular attention should be paid to controlled disposal of the residues from waste gas and waste air-cleaning processes, and from waste water purification and waste matter treatment.

Both the public and the authorities are becoming more and more concerned about the noise created by steelworks. This noise is often connected with the measures taken to combat atmospheric pollution, and it may be a nuisance both for the area surrounding the works in densely populated areas, and for workers in the plants themselves.

Any measures to reduce this noise should, first and foremost, aim at developing noiseless manufacturing processes, i.e. reducing noise at its source.

Only where noise cannot be reduced at source by modifying the design or process, if possible without incurring much expense, will it be necessary to adopt the often expensive measure of insulating the noise source from the surroundings or even the entire workshop from the residential area around it.

In many jobs a certain degree of air pollution by dust, smoke, fumes, gases and noise will be almost inevitable. We must encourage research which, on the one hand, helps us to assess the health hazards they involve, and on the other hand, finds ways and means of reducing these hazards, for example by:

— replacing noxious substances by non-dangerous, or at least much less dangerous, substances,

— devising the best possible methods of individual protection.

The research programme must correspond to the reality of production techniques and adapt to the foreseeable conditions of their development. This means that the fight against pollutant emissions must keep face with production methods *and the loud and growing demands for environmental protection,* otherwise there will be a risk of witnessing a recession in the results obtained in this field and seeing the progress made in recent years destroyed.

It would be appropriate for the programme to mention the possibility of a contribution from the

ECSC towards covering the risk which attends the large scale application of a new technique. This contribution could be payable the first time that techniques arising from the research work supported financially by the ECSC were applied.

To indicate briefly the development expected in the iron and steel industry, we can refer to the information contained in the 'Memorandum on the general objectives for the iron and steel industry in the Community for the years 1975-1980'. (1)

On the other hand the programme ties up with the general outlines of the environmental protection programme which the Commission of the European Communities has proposed to the Council of Ministers. (2)

3. Development of production in the iron and steel industry

A comparison of 1975 with 1969 for the Community of Six shows the following trends in output:

Pig iron:

The production capabilities (3) of blast furnaces in the Community will increase from 88 million metric tons in 1969 to 123 million metric tons in 1975, a mean annual rate of growth of 5·7 %.

This increase will be accompanied by a reduction in coke consumption and greater injection of liquid or gaseous fuels. Moreover, the increase will be achieved by the commissioning of new or modernized large diameter blast furnaces. Other processes may also appear (e.g. direct reduction).

Steel:

The relevant production capabilities for steel will increase from 121 million metric tons to 163 million metric tons, an annual growth of the order of 5·2 %. There will be a great deal of development in the means of production; the proportions could be as follows (1969 to 1975):

Basic Bessemer	from	25·2 %	to	7·7 %
OH	from	23·2 %	to	10·4 %
LD/OLP-Kaldo	from	38·3 %	to	63·3 %
OBM/LWS	from	—	to	4·5 %
Electric	from	13·4 %	to	14·1 %.

In addition, research into the optimum production conditions is resulting in companies concentrating their investment in large plants. Assuming that the plans now under consideration come to fruition, eleven works will be able to produce at least four million metric tons of raw steel per year (three of which will be coastal works) as against only three in 1969 and one in 1965.

Another trend in steel production should be mentioned, which is the construction of mini-works. These use the arc-furnace method and often the continuous casting method as well. They are usually designed to produce bars for reinforced concrete on very simple types of rolling trains.

For marketing reasons these mini-works are usually built near large cities and in industrial areas. They therefore need particularly efficient technical equipment for collecting and treating pollutants and their noise-control aspects require particular attention.

As for quality and appearance of the steels, there will be a movement towards products which will have had more and more treatment and be diverse in shape and service properties, the result of which will be the development of new treatment shops.

4. Requirements of research in respect of combating pollution in the iron and steel industry

The above sketch shows that there is every reason to consider research on the adaptation of preventive devices to the development of production, to the larger and larger equipment required to achieve this development, as well as taking into account the changes in the distribution of the means of production.

In addition, control devices and the development of knowledge have enabled to discover pollutants whose existence was suspected but whose relative importance was not conceived.

(1) OJ No C 96, 29. 9. 1971.

(2) OJ No C 52, 26. 5. 1972.

(3) Production capability is defined at the maximum output possible during a year under normal operating conditions, taking into account repairs, maintenance, normal holidays, with the plant available at the start of the year, also taking into account the additional production from plant before it is commissioned and existing plant which should be fully run down during the year. The development of production must be based on the probable proportions of the capacity of each of the plants in question and assuming that primary materials are available.

It would be advisable also for the iron and steel industry to be equipped with the necessary technical, new or improved in certain cases, devices to be in a position to obey the legislation or regulations passed by governments on the matter of environment.

The iron and steel industry will, thus, be required to solve:

— *old*

problems, for which satisfactory solutions have yet to be discovered;

— *new*

problems, where almost everything has yet to be started.

The tendency to site some works on the coast also has certain consequences in respect of pollution. In fact, there are stricter limits due to the proximity of holiday and tourist resorts and to the quality that it is desired to give to or preserve in sea water, its fauna and flora.

II

RESEARCH PROGRAMME

In developing proposals for research topics, we have followed the logical order of processing and converting metal, with the rider that we have remembered the need to take problem of air and water pollution into account.

1. Coke-oven plants

The problems posed by the *charging of coal* and the *quenching of coke* have been largely solved in practice, especially in new plants, but treatment in old plants remains difficult and costly.

In contrast, the collection of fume during the *discharging of coke* and its cleaning are still awaiting an industrially applicable solution.

The problems of treating waste water from coking plants should be studied more intensely. The usual method of cleaning these waste waters is to dephenolise them by an extraction process, and in some cases to use an activation process as well, but it has not yet been discovered what further treatment to give the waste water purified by these methods.

Research of this sort must be started in order to meet the regulations expected in this field.

2. Production of pig-iron

(a) *Sintering of ores*

In principle, sinter plants are provided with anti-pollution equipment at the construction stage. But the use of various fuels, the incorporation of residues, and the employment in more and more cases of exotic ores, pose problems which for the moment have no solution as to the quantity and nature of the dust emitted and to the noxious waste gases.

(b) *Blast furnaces*

The treatment of gaseous emissions from blast furnaces had already been solved earlier to an extent which had resulted in pollution due to blast furnaces being considered as satisfactorily resolved.

However, increasing injection of sulphur-containing solid, liquid, or gaseous fuels, again raises the problem of SO_2 emission when blast furnace gas is used. It therefore appears necessary to investigate this phenomenon and also means for reducing the amount of this sulphur in the gas.

In addition, pollution of the environment during tapping of blast furnaces will have to be eliminated with attention to the following factors: increase of production, size of installations and composition of the burden.

Neither should the treatment of blast furnace slag be neglected, nor the problems arising from the treatment of blast furnace gas washing waters, which may contain cyanides, zinc and lead compounds, fluorides and many other substances.

3. Steel works

(a) *LD, LDAC, OLP, Kaldo works*

The elimination of brown fume from oxygen converters has progressed in the last decade due to the introduction of various processes which work well in practice, having regard to the standards of purification imposed on them. Moreover, the industry is continuing to research new devices which are smaller, cheaper to instal and maintain and have increased operational reliability.

Public and administrative pressure requires that there is no 'visible' emission throughout the production cycle. Systems to eliminate brown fume especially at the start and finish of production cycles have yet to be perfected.

A further set of problems, which as far as air pollution is concerned have not yet been solved satisfactorily, arise from the ancillary steelmaking processes, i.e. tilting, desulphurising, slagging off, additions, charging and tapping the converters.

(b) *Basic Bessemer and OBM/LWS works*

Some of the problems mentioned above for the production of top-blown steel are applicable to bottom-blown converters. While it is perhaps superfluous to research into solutions for the classic basic Bessemer process because of its rapid decline, it is still opportune to examine the cases of the Oxygen-Bottom Blowing Metallurgy and Loire-Wendel-Sprung processes.

(c) *OH steel works*

Although there is a downward trend because new steelmaking techniques have gained ground, OH steel will continue to form a considerable proportion of total steel production in the foreseeable future. The reasons for this are improved technology, the energy production situation, cost considerations, and the capacity to reprocess substantial amounts of substandard types of scrap.

(d) *Electric furnaces*

The increase foreseen for steel production in electric furnaces, the rise in their power, and the use of UHP furnaces will force attention to be paid to this type of production. This poses problems of industrial hygiene in steelmaking shops and of protection of the environment which have only been touched upon sporadically during the previous research programme.

4. Rolling mills

This industrial sector has not in the past been an object of research in the field of air pollution, since it plays a very small role. However, the soaking pit and the reheating furnace, flame scarfing and grinding of ingots could be sources of emission of gas, dust or fumes requiring preventive measures.

The consideration of water pollution, the development towards products requiring greater treatment and the surface treatment of products raise questions to be put to the research worker.

5. General problems

This heading groups together the various proposals as follows:

— reduction of pollution caused by storage and handling of powdery or muddy waste and residual matter;

— treatment, preparation and re-use of residual matter from iron and steel production and from air and water cleansing plants;

— measures to reduce the amount of waste water and the pollution it contains;

— prevention of dangers caused by inhaling toxic gases or dusts, e.g. silicogenous dust occurring in the handling of certain refractory or abrasive materials;

— reduction in the noise levels of certain plants in the iron and steel industry.

6. Measurement of pollution

As in the two previous programmes, measurement will have an important role to play in the projected new programme.

For the fight against pollution to be efficient and respect ecological data, it is necessary to know the chemical and physical nature of the pollution as well as its quantity and concentration at the working position, in the air, water and earth. To this must be added a specific knowledge of the properties of pollutants likely to affect the environment, separately and in combination.

The measurement of pollution and a thorough knowledge of its effects on the environment as well as the many inter-relationships between pollution of air and of water enables the main dangers to be recognized and priorities to be established in the fight against pollution. It also enables the technically and economically most appropriate methods of combating pollution to be selected and an objective evaluation of the results obtained to be made.

The measurement of emissions assumes great importance in the light of the use of new processes, especially in the field of further processing and within the framework of a much greater use of recycling. The development of simple and reliable measurement devices and procedures adapted to practical conditions appears to be necessary in this field (including that of continuous recording devices and procedures whose utilization is necessary for technical, industrial or statutory reasons).

Up to now there has been little information on the effects which waste water from coke-oven plants and iron and steel works may have on public waters and effluent treatment plants. Measurement must enable the noxious effects of this waste water to be determined according to the different production layouts of the works, the system used for their circulation (continuous flow or closed circuit), and its method of operation. Effects on the environment should also be examined in the light of the various regional and local conditions.

The increasing supply to the population of surface water and the interest created by the protection of water requires increased safety of operation of waste water treatment plants. Early detection of operating defects and improvement of the regulation concerning residual water treatment plants presupposes the development and testing of suitable measurement devices.

Finally, the development of suitable methods of interpretation and the setting up and testing of calibration standards are research tasks equal in importance to the comparison of existing measuring devices and the already mentioned further development of measuring devices and methods. It would be advisable to make comparisons on the basis of existing equipment.

The encouragement and organization of research work in respect of standardizing sampling procedures, measurement and operation (including equipment), the coordination of research in the same field and, generally, the exchange of information and experience must be considered integral parts of the programme. All this will enable comparable results to be obtained, superfluous duplication avoided and rational use of community funds hoped for.

III

IMPLEMENTATION OF RESEARCH PROGRAMME

1. Duration of programme

Taking into account the development of research work which normally takes a minimum of two years of actual work and often involves extensions connected with the research process itself, it appears advisable to allot a total period of five years to the third programme for the combating of pollution in the iron and steel industry.

This period favours research on new topics outside the normal work routine. Nevertheless, it enables a convenient link to be made with targets established for production or investment without being drawn into very risky considerations. In addition, it corresponds to the length of certain national programmes.

The practical realization of the programme, by means of the presentation to and examination by committee of the exact projects to be included, will thus commence during 1973.

2. Financial aspects of the programme

The estimation of the credit to be allotted for the execution of the research programme rests on the following considerations:

(a) The programme is planned as a function of the participation from 1 January 1973 of the three new member countries of the European Community. This will result in a considerable increase in the volume of research to be undertaken.

(b) The amount of anti-pollution research has had to increase under the pressure of public opinion and administrative authorities who have for some time been sensible of such problems. The administrative authorities tend to impose very strict regulation and to shorten implementation times.

(c) The implementation of the previous programmes has shown over the years what are the research capacities of the various institutes and organizations specializing in the problems of steel industry pollution with which the Commission of the European Communities have had research contracts. Their research staff and equipment are now well known and make up a basis for a true appreciation of the type and amount of work to be entrusted to them. Most of the institutes considered already have sufficient basic equipment including measurement and analysis devices as well as the obligatory industrial connections.

(d) Even more than the last programme, the third programme will concentrate on the most important points of prevention techniques and on the development of methods aimed at the practical and efficient reduction of pollutant emission. Authorization has been given to proceed in this way thanks to the attainments of the research in previous and present programmes.

(e) The research institutes and organizations have, during the course of their work, informed the Commission of the European Communities of their plans and intentions concerning the development of activities within the framework of the new programme. These projects constitute one of the fundamentals for the appreciation of the financial means to be made available for the promotion of research.

(f) Previous programmes were aimed solely at combatting atmospheric pollution. For the reasons given above, it has been shown that it has become necessary to take into account also problems posed by industrial water pollution and by the elimination or proper disposal of industrial wastes, especially toxic wastes.

(g) It does not seem necessary to point out that costs of personnel and material for research purposes have risen considerably during recent years. One recent study showed that the cost of labour in research institutes was tending to rise by 6 % to 8 % per annum while overall costs of materials are increasing by 10 % to 15 % per annum. This increase in costs must be taken into account when determining the amount of credit to be allotted.

(h) The credit provided must enable operating costs to be covered throughout the execution of the programme.

Operating costs include holding meetings of specialists, publications, dissemination of results, missions by experts and research workers, participation in specialist meetings, organization of study and information sessions, etc.

Taking into account these factors and the estimates carefully made during the preparation of this programme it seems justifiable to make available a credit of 10 000 000 AME accounting units to carry it out.

As in the past it must be stated that the aid provided by the Commission of the European Communities will in no case exceed 75 % of the total direct costs resulting from the execution of each project.

3. Coordination of works — dissemination of results

As in the previous programmes a research Committee will be charged with following the development of the research from a scientific and technical point of view and with ensuring the necessary coordination of the work in this field. It will aim particularly at obtaining proper distribution of the work to take account of the affinities and capabilities of the interested organizations. Groups of experts will be formed to study the development of specialized sectors in more detail. These small homogeneous groups will be brought in to examine on the spot the research work, the useful particulars and the knowledge to be gained during the research operations. They will be obliged to advise the Commission with a view to avoid duplication and the recommencing of work brought a proper conclusion elsewhere. It will, thus, mean that they must have the most efficient documentation service possible. Their role will consist in placing primary information not only at the disposal of research workers but also of the professional world.

In addition, the Commission of the European Communities will disseminate with the means at its disposal the knowledge gained through the research work and reserve a favourable reception for all proposals aimed at efficiency in this field.

The fact that the aim of the research programme is to promote means of combating pollution in the iron and steel industry does exclude the fact that there will be research on means of production which by their very nature will cause less pollution in accordance with the old adage 'better prevention than cure'. These latter research projects are in the technical research field of 'Steel' with which full collaboration will be maintained and confirmed.

IV

CONCLUSIONS

The Commission of the European Communities

— considering the imperative need both from the social and the industrial point of view to pursue the fight against pollution for which the iron and steel industry is responsible and to ensure better hygiene at the working positions in iron and steel works,

  — by technical means against emissions of dust and fume;

  — by technical means against emissions of vapours and pollutant gases;

  — by technical means against the pollution of industrial waste water·

  — by the technical control of noise;

  — by the elimination of industrial waste, or by its proper disposal, especially toxic wastes.

— taking into account the favourable and harmonious opinions received from professional, government and scientific consultative committees on the implementation of a research programme for 'Combating pollution in the iron and steel industry by technical means';

— in respect of Article 55 of the ECSC treaty;

— has decided to make available 10 000 000 AME units of account for the execution over a period of five years of the research programme.

I

(Acts whose publication is obligatory)

REGULATION (EEC) No 2380/74 OF THE COUNCIL

of 17 September 1974

adopting provisions for the dissemination of information relating to research programmes for the European Economic Community

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament;

Whereas, to help in attaining the objectives listed in Articles 2 and 3 of the Treaty, the Council adopted research programmes for the European Community on 14 May 1973 and 18 June 1973 in accordance with the conditions of Article 235 of the Treaty;

Whereas the Council reserved the right to define at a later stage the provisions for the dissemination of information resulting from the execution of these programmes;

Whereas, therefore, it is necessary to define these provisions;

Whereas the Treaty establishing the European Economic Community made no provision for the powers required for these purposes,

HAS ADOPTED THIS REGULATION:

Article 1

This Regulation shall be applicable to information and inventions, whether patentable or not, resulting from the execution of the research programmes for the European Economic Community adopted by the following Decisions:

(a) Council Decision No 73/125/EEC [1] of 14 May 1973 adopting a research programme in the field of standards and reference substances (certified reference substances);

(b) Council Decision No 73/126/EEC [1] of 14 May 1973 adopting a research programme on the protection of the environment;

(c) Council Decision No 73/127/EEC [1] of 14 May 1973, adopting a research programme in the field of teledetection of earth resources;

(d) Council Decision No 73/174/EEC [2] of 18 June 1973, adopting a research programme on the protection of the environment (direct project);

(e) Council Decision No 73/175/EEC [2] of 18 June 1973, adopting a research programme in the field of standards and reference substances (certified reference substances);

(f) Council Decision No 73/176/EEC [2] of 18 June 1973, adopting a research programme in new technologies (use of solar energy and recycling of raw materials);

(g) Council Decision No 73/179/EEC [2] of 18 June 1973, adopting a research programme in the field of reference substances and methods (Community Bureau of Reference);

(h) Council Decision No 73/180/EEC [2] of 18 June 1973, adopting a research programme for the protection of the environment (indirect project).

Article 2

The information and inventions referred to in Article 1 shall be the property of the Community.

The Commission shall, where appropriate, ensure the protection of these inventions on behalf of the Community.

Article 3

Rules determining ownership with regard to inventions whether or not patentable, resulting from research or work done under contract, shall be laid down in each contract.

[1] OJ No L 153, 9. 6. 1973.

[2] OJ No L 189, 11. 7. 1973.

Where these inventions belong to the contractor, the Community shall obtain free licence to use them for its own needs.

The contractor shall be required to exploit inventions which belong to him or to have them exploited under conditions which are in conformity with the interests of the Community and within a period to be laid down in the contract.

The Commission shall be entitled to grant sub-licences, in accordance with the conditions laid down in Articles 6 and 7 where the contractor, without a legitimate reason, fails to fulfil his obligation to exploit these inventions or to have them exploited.

Article 4

The Commission shall transmit the information referred to in Article 1 as promptly as possible to the Member States as well as to persons and undertakings which pursue, on the territory of a Member State, a research or a production activity justifying access to such information. The Commission may make communication of this information conditional upon its remaining confidential and not being passed on to third parties.

Article 5

Information which cannot be put to industrial use and the nature of which does not justify its being restricted to the Member States nor to the persons and undertakings referred to in Article 4, shall be published by the Commission.

Article 6

The Member States shall be entitled to obtain a licence from the Commission in respect of invitations, whether or not patentable, which belong to the Community. The same shall apply to persons and undertakings which pursue, on the territory of a Member State, a research or production activity justifying the grant of such a licence.

Grant of a licence may be refused where the applicant does not undertake to manufacture effectively within the Community.

The Commission shall grant sub-licences under the same conditions, where the fourth paragraph of Article 3 entitles it to make such grants.

The Commission shall grant such licences or sub-licences on terms to be agreed with the licensees and shall furnish all the information which it is entitled to supply and which is required for their exploitation. These terms shall relate in particular to suitable remuneration and, where appropriate, to the right of the licensee to grant sub-licences to third parties and to the obligation to treat the information as a trade secret.

Failing agreement on the terms referred to in the fourth paragraph, the licensees may bring the matter before the Court of Justice of the European Communities so that appropriate terms may be laid down.

Article 7

The Commission shall publish offers for the grant of non-exclusive licences by all appropriate means.

If these offers do not lead to applications for licences, the Commission shall publish them in the *Official Journal of the European Communities*. If, within six months from such publication, no application is made, the Commission may offer and grant exclusive licences for a maximum period of five years.

Sub-licences granted by the Commission pursuant to the fourth paragraph of Article 3 shall be subject to the same conditions. However, the holder of an exclusive sub-licence shall not oppose the exploitation of the invitation by the owner and the owner shall not grant any further licences during the term of validity of the exclusive sub-licence.

Article 8

The information and inventions which the Commission has the right to supply and to which this Regulation is applicable may be transferred or exchanged within the framework of agreements or conventions with a third country or an international organization, in accordance with the conditions of Article 228 of the Treaty.

Article 9

When concluding the necessary contracts, the Commission shall ensure compliance with this Regulation by including appropriate clauses.

Article 10

This Regulation shall enter into force on the third day following its publication in the *Official Journal of the European Communities*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 17 September 1974.

For the Council

The President

J. SAUVAGNARGUES

COUNCIL DECISION

of 17 December 1974

adopting a research and training programme for the European Atomic Energy Community on plutonium recycling in light-water reactors (indirect nuclear projects)

(74/642/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof;

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee;

Having regard to the Opinion of the European Parliament (1);

Having regard to the Opinion of the Economic and Social Commisttee (2);

Whereas, under the common scientific and technological policy, the multi-annual research and training programme is one of the Community's main ways of contributing to the rapid development and growth of nuclear industries and towards the acquisition and dissemination of knowledge in the nuclear sector,

HAS ADOPTED THIS DECISION:

Article 1

A research and training programme on plutonium recyling in light-water reactors, as set out in the Annex hereto, shall be adopted for a period of four years from 1 January 1975. The Annex forms an integral part of this Decision.

Article 2

The maximum amount of the expenditure commitments and the staff required for the purpose of implementing this programme shall be fixed at 4·5 million units of account and three persons respectively for the duration of this programme. The unit of account shall be as defined in Article 10 of the Financial Regulation (3) of 25 April 1973 applicable to the general budget of the European Communities.

Article 3

The programme set out in the Annex hereto shall be reviewed at the end of the second year.

Done at Brussels, 17 December 1974.

For the Council

The President

M. d'ORNANO

(1) OJ No C 93, 7. 8. 1974, p. 80
(2) OJ No C 125, 16. 10. 1974, p. 50.

(3) OJ No L 116, 1. 5. 1973, p. 1.

ANNEX

Indirect nuclear project

Plutonium recycling in light-water reactors

A maximum of 4·5 million units of account shall be assigned to this programme, and the staff shall comprise three persons. The purpose of the programme shall be the joint acquisition of data to ensure judicious use of plutonium prior to the operation of fast-reactor power stations on an industrial scale.

The programme shall comprise two parts:

(a) the object of the first part will be to solve the general problems attendant upon the use of plutonium;

(b) the object of the second part will be to acquire the scientific and technical data still needed with regard to plutonium recycling in light-water reactors.

The programme will be implemented under contract.

COUNCIL DECISION

of 9 December 1974

supplementing the Community programme of research into classical swine fever and African swine fever

(74/650/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 43 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament;

Whereas by Decision No 72/446/EEC [1] the Council adopted a Community research programme into classical swine fever and African swine fever;

Whereas it is expedient to exploit the particular epidemiological conditions in the United Kingdom, in Ireland and in Denmark for the purposes of examining the existing, and any future, body of scientific knowledge gained in conjunction with work on the Community programme of research into classical swine fever and African swine fever;

Whereas, furthermore, a contribution should be made towards the setting up of scientific teams competent in epidemiological matters for the purposes of improved prevention of epizooty risks in the countries of the Community which are at present free from classical swine fever and African swine fever,

HAS DECIDED:

Sole Article

The Annex to Decision No 72/446/EEC is supplemented as follows:

I. Description of the work:

A. *Classical swine fever:*

I. Virology:

— purification of the virus labelled by means of radioactive precursors;

— breaking down of the virus into its sub-units and study of these sub-units.

II. Pathology:

— study of the antigenic relationships between the classical swine fever virus and the bovine diarrhoea virus for the purposes of improving differential diagnosis between the two diseases;

— laying down of the most effective means of administering this vaccine;

III. Immunology:

— determination of the age at which a piglet sets up its local immunity process;

— study of the immunizing activity of bovine diarrhoea virus as compared with classical swine fever virus.

B. *African swine fever:*

Perfecting of differential diagnosis in the light of the evolution of wild strains.

II. Participants:

United Kingdom:

— The Animal Virus Research Institute, Pirbright, Woking, Surrey;

— The Central Veterinary Laboratory, New Haw, Weybridge, Surrey;

— The Department of Animal Husbandry, University of Bristol, Gloucestershire.

[1] OJ No L 298, 31. 12. 1972, p. 50.

Ireland:

— The Veterinary Research Institute, Laboratory of Dublin.

Denmark:

— The State Veterinary Institute for Virus Research of Kalvehave.

Done at Brussels, 9 December 1974.

For the Council

The President

Ch. BONNET

COMMUNICATION FROM THE COMMISSION

Research and development related to coal

(under the terms of Article 55 (2) (c) of the ECSC Treaty)

The Commission of the European Communities has established a new medium-term research aid programme for coal (1975 — 1980) [1] and, in the documents 'Towards a new energy policy strategy for the European Community' and 'Medium-term guidelines for coal 1975 — 1985' among others, has elaborated proposals concerning the intensification of research and technological development related to solid fuels.

In order to complement the medium-term coal research aid programme 1975 — 1980, the Commission intends, by means of the present communication, to re-specify the criteria to be taken into consideration for the initiation, from 1975, of new research and development programmes, activities and projects forming the subject of requests for aid to be presented to the Commission before 1 February 1975 for the year 1975, and subsequently before 1 September of each year for the following year, according to the procedure [2] prescribed and existing for the submission of requests.

'Medium-term guidelines for coal 1975 — 1985' recommends the measures to be taken with regard to research and development and stipulates that carefully coordinated activities at Community level are to be continued and undertaken in the field of coal extraction and upgrading: some to contribute towards achieving the objectives of production and productivity, and others to strengthen the competitive position of coal. *Various priority areas, which are the same as those of the new medium-term coal research aid programme are clearly defined herein.*

The activities that are to be carried out in parallel in the various sectors of the mining industry should be designed to achieve :

— the development of completely mechanized, or even automated, high-productivity coal faces,

— a constant improvement in working conditions, in safety, and in dealing with the special problems of mining (gas, ventilation, dust, ergonomics, etc.),

— the complete mechanization of roadway drivage in seams or in rock,

— an improvement in the degree of utilization of mining equipment and increasing reliability of installations.

— the improvement of the infrastructures at existing pits and the development of infrastructure concepts suited to the high tonnage new capacities which are to be created (shafts and roadways),

— the programming and control of workings by applying modern managment techniques (computers),

— the automation of coal preparation plants.

The technical problems relating to safety and working conditions affect all aspects of the mining industry. In fact, these problems are closely linked to all techniques and technologies and a research and develpment project which fails to take account of them is doomed to failure.

The research and development activities concerned with coal upgrading must cover :

— improved combustion techniques compatible with the protection of the environment, e.g. fluidized bed combustion,

— increased productivity in conventional coke ovens and the fight against pollution (effluents and harmful fumes). as well as improved upgrading of by-products, especially the gases,

— development of upgrading processes to enable new products to be manufactured : formed coke, special fuels, polymers, activated charcoal, civil engineering materials, etc.,

—fundamental scientific studies (laboratory and small pilot scale) on the transformation of solid fuels into hydrocarbons.

The criteria to be taken into consideration for research and development activities that could receive financial aid from the ECSC under the terms of Article 55 (2) (c) of the ECSC Treaty are :

[1] OJ No C 60, 25. 5. 1974, p. 16.
[2] OJ No C 139, 12. 11. 1974, p. 1.

1. In general:

— correspondence between the objectives of the projects and those of the new energy policy strategy for the Community, of the medium-term guidelines for coal (1975-85), and of the general common research policy (more particularly, those of energy for Europe that are concerned with research and development),

— the value of the research or, in other words, the increase in productivity or financial returns that the coal industry could derive from it, as well as its affect on working conditions, safety and the environment,

— the interest for the Community of research and technological developments,

— the delay anticipated between the obtaining of results and their practical application.

2. *In particular:*

— the wide application of scientific and technical results (methods, processes, machines, etc.) among the interested enterprises of the Community, mechanization and automation being the most important,

— the perfecting of existing technical and technological processes with a view to improving the performance and reliability of mining equipment and installations, as well as the study of new equipment adapted to a variety of mining conditions, and of new processes corresponding to the evolution of the situation,

— the realization of research and development projects embracing a range of operations in underground workings and in installations for preparing and upgrading the products of the Community's coal mining industry without, however, neglecting the interest of the individual, original projects capable of making a contribution to the state of the industry.

COUNCIL DECISION

of 18 March 1975

adopting an initial three-year Community plan of action in the field of scientific and technical information and documentation

(75/200/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament (1);

Having regard to the Opinion of the Economic and Social Committee (2);

Noting the report by the Scientific and Technical Information and Documentation Committee (STIDC) and the Opinion of the Scientific and Technical Research Committee (CREST);

Whereas on 24 June 1971 the resolution of the Council and of the representatives of the Member States (3) meeting in the Council was adopted with a view to coordinating the action of the Member States regarding scientific and technical information and documentation (STID);

Whereas the Heads of State or of Government, meeting in Paris on 19 and 20 October 1972, expressed their determination to define the objectives and to ensure the development of a common policy in the field of science and technology;

Whereas, under Article 2 of the Treaty, the Community shall have as one of its tasks to promote throughout the Community a harmonious development of economic activities and continuous and balanced expansion;

Whereas the proliferation of information systems and their rapid but disparate progress through competition between multiple public and private ventures make the establishment of the European information and documentation network envisaged in the resolution of 24 June 1971 a matter of urgency;

Whereas the establishment of this network is likely to make an effective contribution to the achievement of the abovementioned objectives of the Treaty;

Whereas the Treaty has not provided for the necessary powers;

Whereas, on 14 January 1974, the Council adopted a resolution (4) concerning an initial outline programme of the European Communities in the field of science and technology,

HAS DECIDED AS FOLLOWS:

Article 1

An initial Community plan of action in the field of scientific and technical information and documentation as contained in the Annex is hereby adopted to take effect for three years as from 1 January 1975.

Article 2

The Commission shall implement the plan of action, assisted by the Scientific and Technical Information and Documentation Committee (STIDC), and shall keep the Committee and the Scientific and Technical Research Committee (CREST) regularly informed of progress. The Commission shall also submit each year to the Council and the European Parliament a full report on the subject which will be taken up in the general report.

Article 3

The expenditure necessary for the implementation of the plan of action in 1975 shall be indicated in the Annex.

Article 4

The Commission shall decide on the particulars of the activities to be carried out under the plan of action in 1976 and 1977 after consultation with STIDC and CREST.

On this basis, the Commission shall determine the estimates of expenditure for 1976 and 1977 under budgetary procedure.

Done at Brussels, 18 March 1975.

For the Council

The President

R. RYAN

(1) OJ No C 32, 11. 2. 1975, p. 7.
(2) OJ No C 47, 27. 2. 1975, p. 38.
(3) OJ No C 122, 10. 12. 1971, p. 7.
(4) OJ No C 7, 29. 1. 1974, p. 6.

ANNEX

INITIAL THREE-YEAR COMMUNITY PLAN OF ACTION IN THE FIELD OF SCIENTIFIC AND TECHNICAL INFORMATION AND DOCUMENTATION

The expenditure necessary for the implementation of the plan of action is estimated at 1 840 000 units of account for 1975. To ensure the progress of the plan of action, the amounts for 1976 and 1977 are estimated at 2·3 million and 2·5 million units of account respectively on the basis of 1974 prices. The exact amounts for 1976 and 1977 will be laid down in the budget of the European Communities.

The objectives of the plan of action comprise particularly:

1. Sectoral information systems

The rapid development of sectoral information systems and their integration into the planned European information and documentation network involves:

— establishing Community systems which are to be made compatible with the network, for example in the agricultural and environmental sectors;

— examining the need for the creation of new systems in selected sectors;

— and fostering rationalization and development of various worthwhile private ventures, particularly in the industrial sphere.

The sum allocated for this purpose in 1975 is 550 000 units of account.

2. Establishment of the information network

Feasibility and pilot studies will constitute the essential starting point. Specifications for hardware and software will then be drawn up and standards defined for the management of the network and its interaction with users. Only then will the first software be developed, hardware and telecommunication lines gradually installed and the phased adaption of specialized Member State information systems to the network be undertaken.

The sum allocated for this purpose in 1975 is 660 000 units of account

3. Information technology and methodology

This covers:

— support activities aimed at establishing effective multilingual systems and standard formats for information exchanges;

— the training of specialists in information technology and the education of users;

— and the improvement of systems methodology, data banks and information and analysis centres.

The sum allocated for this purpose in 1975 is 630 000 units of accounts.

Measures to achieve the above objectives will in the main assume the form of contracts with specialist bodies in the Member States and may in appropriate circumstances be extended to bodies in non-member countries in accordance with the Council resolutions of 24 June 1971 and 14 January 1974.

Moreover, the financing in 1976 and 1977 of the conversion of national scientific and technical information and documentation systems to the European network standards and, in particular, the allocation of the burden of expenditure between the Member States and the Community should be examined in detail and agreed upon at the appropriate time.

RESOLUTION

of the Council and of the Representatives of the Member States, meeting in the Council with a view to coordinating the action of the Member States regarding scientific and technical information and documentation (STID)

(adopted at the 157th session of the Council held on 24 June 1971)

THE COUNCIL AND THE REPRESENTATIVES OF THE MEMBER STATES, MEETING IN THE COUNCIL,

Having regard to the report drawn up by the 'Scientific and Technical Research Policy' working party of the Medium-Term Economic Policy Committee, in pursuance of the Resolution adopted on 31 October 1967;

Whereas in order to achieve economic, scientific and technical progress it is important that scientific, technical, economic and social documentation and data should be made available by the most modern methods to all persons needing to use such information, under the most favourable conditions as regards speed and expense;

Whereas it is necessary to encourage efforts aimed at this objective and, to this end, to seek the coordination of action being carried out throughout the Community in such a way as gradually to establish a European documentation and information network;

Whereas the establishment of such a network could only be effectively realized by the proper coordination of Member States' policies in this regard, and whereas therefore the procedure for such coordination should be laid down,

HAVE AGREED:

1. In order to encourage progress in scientific and technical information and documentation and gradually to establish a European documentation and information network, the Member States shall coordinate their action regarding:

(a) the encouragement of initiatives of whatever origin for the creation and rational development of scientific and technical information and documentation systems, so that through their permanent association a European network will be established;

(b) the drawing up of rules and procedures aimed at ensuring the cohesiveness of such a network;

(c) the encouragement of the training of specialists and the education of users;

(d) the encouragement of technological progress in the science and processing of documentation.

The centres in the Member States will be prepared to associate the centres of other European States in the establishment of systems or, where appropriate, to facilitate their eventual access to such systems.

As regards relations and negotiations with third countries in scientific and technical indormation and documentation, the Member States shall keep one another regularly informed and shall compare their points of view in order to harmonize them as much as possible without prejudice to the provisions of the Treaty.

2. With a view to the implementation of coordinated action by the Member States, the general guidelines and, where necessary, the common positions shall be adopted by the Council or by the Representatives of the Member States meeting in the Council, on a proposal from the Commission or from one or more of the Member States.

Where action or expenditure by the Community or by the Member States as a whole might appear necessary, the Council or the Representatives of the Member States meeting in the Council shall be responsible for adopting the appropriate decisions.

3. The preparation of projects or other measures arising out of the provisions of paragraph 2 above shall be the responsibility of the Commission and of the 'Scientific and Technical Research Policy' working party of the Medium-Term Economic Policy Committee.

In order to assist them in the performance of these tasks and to ensure that the current duties in regard to coordination and management are carried out the Medium-Term Economic Policy Committee will, within the framework of the 'Scientific and Technical Research Policy' working party set up a 'Scientific and Technical Information and Documentation Committee' (STIDC).

This Committee shall be composed of persons responsible for drawing up policy on scientific and technical information and documentation policy in each of the Member States, together with representatives from the Commission. Secretarial assistance will be provided by the Commission.

Where a revision of the structures responsible for the analysis of problems and the comparison of national policies regarding scientific and technological research might alter the powers of the Scientific and Technical

Research Policy group of the Medium-Term Economic Policy Committee, the Council will adopt all necessary measures to ensure the accomplishment of the tasks set out in paragraph 3 of this Resolution.

RESOLUTION

of the Council and of the Representatives of the Member States, meeting in the Council on the creation of a system of metallurgical documentation and information (SMDI)

(adopted at the 157th session of the Council held on 24 June 1971)

THE COUNCIL AND THE REPRESENTATIVES OF THE MEMBER STATES, MEETING IN THE COUNCIL,

Having regard to the report drawn up by the 'Scientific and Technical Research Policy' working party of the Medium-Term Economic Policy Committee, pursuant to the Resolution adopted on 31 October 1967;

Having regard to the Resolution of the Council and of the Representatives of the Member States meeting in the Council, with a view to coordinating the action of Member States regarding scientific and technical information and documentation;

Whereas it is important to help make scientific and technical data in the metallurgical field available to all interested persons under the most favourable conditions as regards speed and expense;

Whereas to this end it is desirable, as a first experiment in the framework of coordination of national policies regarding STID and of the creation of a European network in this field, to create a decentralized system of cooperation for metallurgical scientific and technical documentation and information;

Whereas, taking into account the powers which the ECSC and EAEC Treaties confer on the Communities in the field of metallurgy, it is appropriate that the Centre for Information and Documentation (CID) of the Commission should be linked to such a system,

(a) recognize the value of creating a system of metallurgical documentation and information the principles and procedures for which are as listed in the Annex to this Resolution;

(b) approve the participation of the Commission in the proposed system in accordance with the procedures set out in the Annex and invite the Commission to submit any constructive proposals with a view to ensuring the participation of its services in such a system;

(c) consider that this Resolution must be seen as a first experiment in the framework of coordination of STID policies;

(d) recognize that the centres of Member States will have to make provision for associating the centres of other European States in such a system.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 14 April 1975

establishing a programme of technological research in the textile sector

(75/266/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, in particular Article 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament (1);

Having regard to the Opinion of the Economic and Social Committee (2);

Considering the Council resolution of 14 January 1974 (3) on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology;

Whereas the final communiqué of the conference of Heads of State or of Government meeting in Paris on 19 and 20 October 1972 envisages the joint implementation of projects of interest to the Community in the context of the development of a common policy in the field of science and technology;

Whereas, pursuant to Article 2 of the Treaty, the Community shall have as its task *inter alia* to promote throughout the Community a harmonious development of economic activities and a continuous and balanced expansion;

Whereas the research to which this Decision relates aims at a variety of objectives, such as the reduction of manufacturing costs, the testing of new fibres, the solution of certain environmental problems, as well as consumer safety and protection, and represents a fundamental step in the development of the textile industry which is an important economic sector of the Community;

Whereas preliminary research carried out by the textile industry has demonstrated the value of a programme of technological research and whereas, therefore, the textile industry intends to join in the programme with a financial contribution twice that of the Community;

Whereas, therefore, this programme appears necessary in order to achieve the abovementioned Community objectives in the framework of the common market;

Whereas the Treaty does not provide all the powers necessary to achieve these objectives,

HAS DECIDED AS FOLLOWS:

Article 1

A research programme for the European Economic Community in the textile sector as set out in the Annex hereto is hereby established for a period of three years commencing on 1 December 1974.

Article 2

An amount of 250 000 units of account shall be allocated for the realization of this programme, the

(1) OJ No C 32, 11. 2. 1975, p. 8.
(2) OJ No C 16, 23. 1. 1975, p. 10.
(3) OJ No C 7, 29. 1. 1974, p. 2.

unit of account being as defined in the Financial Regulation on the establishment and implementation of the budget of the European Communities and on the responsibility of authorizing officers and accounting officers.

Article 3

The Commission shall implement the programme by means of contracts.

Article 4

Inventions, whether patentable or not, and know-how resulting from the implementation of the programme shall be subject to Council Regulation (EEC) No 2380/74 [1] of 17 September 1974 establishing the conditions of use of know-how applicable to research programmes undertaken for the European Economic Community.

Done at Luxembourg, 14 April 1975.

For the Council

The President

G. FITZGERALD

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

PROGRAMME OF TECHNICAL RESEARCH IN THE TEXTILE SECTOR

A maximum of 250 000 units of account shall be provided for implementing the programme which is concerned with the three following themes:

1. **Thermal treatment of chemical fibres**

Main objectives:

Optimization of production methods to improve the yield and the quality of products, especially in small- and medium-sized textile undertakings, which generally lack the required research facilities.

Programme:

Structural modification of chemical fibres, e.g. polyamides, polyester, acrylic and modacrylic, olefin, di- and tri-acetate, under different conditions of thermal treatment (under tension or not, under tension with twist).

Changes, as a result of thermal treatment, in dyeing, mechanical, physical and shape properties.

2. **Textile processing in organic solvents**

Main objectives:

Reduction of water pollution and energy consumption. Use of organic solvents instead of water in production methods.

Programme:

Fibre/solvent interaction:

types of fibre: polyester, polyamide, wool;

types of solvents: perchlorethylene, dichloromethan, hydrocarbon fraction, isopropyl alcohol.

Interactions: solubility of fibre in the solvent;

solubility of solvent in the fibre;

variation in fibre structure.

Rheology in the solvent medium: two-phase effects (fibre/solvent), three-phase (fibre/solvent/water — fibre/solvent/dyestuff), four-phase (fibre/solvent/water/dyestuff).

Mechanical, physical, shape and surface properties.

3. **Fireproofing of textile fibres by radiation grafting**

Main objectives:

Consumer protection by reducing flammability in clothing and household textiles.

Programme:

Types of fibre: cellulosic, wool, polyamide, polyacrylic.

Type of flame retardant: various monomers of vinyl, or acrylic groups, epoxides and others, halogenated, phosphorized or nitrogen-containing compounds.

Irradiation carried out on a pilot scale by electron accelerators.

Physico-chemical control of fire-retardant textiles, and tests of flammability and combustibility in accordance with methods and standards laid down by Member States and certain third countries.

COUNCIL DECISION

of 26 June 1975

adopting a programme on the management and storage of radioactive waste

(75/406/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof;

Having regard to the proposal submitted by the Commission after consulting the Scientific and Technical Committee;

Having regard to the Opinion of the European Parliament;

Having regard to the Opinion of the Economic and Social Committee [1];

Whereas the Community environmental programme, approved in the declaration of 22 November 1973 [2] by the Council of the European Communities and the representatives of the Governments of the Member States meeting within the Council, underlines the need for Community measures on the management and storage of radioactive waste and specifies the content of and procedures for implementing such measures;

Whereas nuclear energy is bound in the near future to become one of the main sources of energy alongside traditional sources, and whereas its specific nature requires permanent monitoring of its potential effects and improved measures and research to protect the environment;

Whereas the development of nuclear energy inevitably involves the production of radioactive waste, and whereas it is therefore essential to find effective means for ensuring the safety and protection of both man and his environment against the potential hazards involved in the management of such waste,

HAS DECIDED AS FOLLOWS:

Article 1

An environmental programme on the management and storage of radioactive waste, as set out in the Annex, is hereby adopted for a five-year period from 1 January 1975.

Article 2

The upper limit for expenditure commitments and for the staff necessary for the implementation of this programme shall be 19·16 million units of account and four staff respectively, the unit of account being as defined in Article 10 of the Financial Regulation of 25 April 1973 [3] applicable to the general budget of the European Communities.

Article 3

The programme set out in the Annex shall be reviewed at the end of the second year in accordance with the appropriate procedures.

Done at Luxembourg, 26 June 1975.

For the Council

The President

J. KEATING

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[1] Doc. CES 617/75.
[2] OJ No C 112, 20. 12. 1973, p. 3.
[3] OJ No L 116, 1. 5. 1973, p. 1.

ANNEX

ENVIRONMENTAL PROGRAMME CONCERNING THE MANAGEMENT AND STORAGE OF RADIOACTIVE WASTE

(INDIRECT ACTION)

An upper limit of 19·16 million units of account shall be allocated to this programme and the number of staff shall be four.

The aim of the programme shall be the joint development and perfecting of a system of management of radioactive waste produced by the nuclear industry which, at its various stages, affords man and his environment the best protection possible.

In order that the Commission may submit suitable proposals at the earliest opportunity, the programme shall seek to promote :

A. **Work to solve certain technological problems** posed by the processing, storage and disposal of radioactive waste.

Processing :

— medium activity solid waste : coating with plastic resins ;

— high-activity solid waste : decontamination and conditioning of irradiated fuel element cladding ;

— high-activity solid waste : immobilization of calcined waste from fission products in a metal matrix ;

— plutonium-contaminated solid waste : incineration process ;

— comparative study of the properties of various materials suitable for the immobilization of high-activity waste.

Storage and disposal :

— storage of solidified radioactive waste in engineered structures ;

— disposal of radioactive waste in suitable geological formations, including those formations currently being studied ;

— storage of gaseous waste.

Study of an advanced management model :

— separation and recycling of long-life waste (actinides).

B. **Work contributing towards the definition of a general framework (legal, administrative, financial)** for the implementation of radioactive waste storage and disposal measures :

— review of problems posed by the management of radioactive waste which could not be solved under existing international legal, administrative and financial provisions and proposals for solutions ;

— study of principles which should govern the management of radioactive waste.

The work described in A and B will in the main be carried out by means of contracts.

COUNCIL DECISION

of 22 July 1975

adopting common research programmes and programmes for the coordination of research in the field of animal leucoses, livestock effluents, beef production and plant protein production

(75/460/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 43 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament (1);

Whereas Council Regulation (EEC) No 1728/74 (2) of 27 June 1974 on the coordination of agricultural research provides for the coordination at Community level of national agricultural research activities in order to further the attainment of the aims of the common agricultural policy;

Whereas Article 5 of the above Regulation provides that the Council shall decide on specific measures for the coordination of research activities designed to allow rational organization of means employed, efficient use of results and the orientation of such work towards the aims of the common agricultural policy and shall also decide on the implementation of joint projects designed to second or supplement work undertaken in the Member States in fields which are of particular importance to the Community;

Whereas progress in research on epizootics makes a direct contribution to the improvement of farm productivity and eliminates major obstacles to the harmonization of legislation and to trade in animals and animal products both inside the Community and with non-member countries; whereas the lack of a differential diagnosis and of knowledge regarding the resistance process in the case of avian leucosis and Marek's disease represents a serious danger for poultry farms; whereas the lack of a reliable method of diagnosis for bovine leucosis constitutes an impediment to the free movement of live cattle;

Whereas the trend towards the specialization and intensification of animal production has given rise to large and intensive livestock units very often without pasturage; whereas the dumping of waste from these units presents serious problems as regards the pollution of the environment, particularly when, as frequently happens, these enterprises are near centres of population; whereas, moreover, these livestock effluents can be very valuable manure; whereas for this purpose farmers generally use mineral fertilizers which are expensive and the long-term availability of which is not guaranteed; whereas the intensive usage of mineral fertilizers also presents a pollution risk;

Whereas the income for a large proportion of farms in the Community depends on the results of beef production; whereas, independently of structural problems, the profitability of intensive beef production is inadequate; whereas the necessary increase in productivity cannot be obtained by increasing prices; whereas progress as regards breeding methods, meat quality and meat yield per animal are therefore necessary; whereas progress in research is usually slower and harder to apply directly in the field of beef production;

Whereas the Community is confronted by a serious deficit in the supply of protein for animal feed; whereas, at the same time, the cost of protein products is of increasing importance in the cost price of animal products; whereas, it consequently appears essential to increase protein production in the Community; whereas an important contribution can be made by improving the protein yield per unit of crops already grown in the Community; whereas, at the same time the introduction of new species and varieties rich in protein should be studied; whereas, at the same time, research is necessary on the use of proteins in animal feed;

Whereas the financial contribution of the Community shall be decided by the Council,

HAS DECIDED AS FOLLOWS:

Article 1

1. The common research programmes and the programmes for the coordination of research in the

(1) OJ No C 157, 14. 7. 1975, p. 10.
(2) OJ No L 182, 5. 7. 1974, p. 1.

field of animal leucoses and livestock effluents and the common research programmes in the field of beef production and plant protein production, contained in the Annex, are hereby adopted.

2. The programmes will begin in 1975.

Article 2

The detailed rules for the application of this Decision, relating in particular to the scientific priorities to be followed within a common programme, the criteria for selecting the research centres and the institutes which will be invited to participate in the specific measures, and the orientation of a programme while it is being carried out shall be adopted in accordance with the procedure laid down in Article 8 of Regulation (EEC) No 1728/74.

Article 3

The Commission shall assure the implementation of coordination programmes in the field of animal leucoses and livestock effluents, in particular by organizing seminars and conferences, study visits, exchanges between researchers, scientific workshops and the collation, analysis and publication of results.

Article 4

Once the programmes have been completed, but not later than 31 July 1977, the Commission shall report to the European Parliament and the Council on the results of the research undertaken in the programmes governed by this Decision and on the use of the sums allocated in accordance with Article 5.

Article 5

The Community's financial contribution to the execution of the programmes mentioned in Article 1 shall be :

Animal leucoses :	
Coordination programme	310 625 u.a.
Common programme	1 350 750 u.a.
Livestock effluents :	
Coordination programme	153 750 u.a.
Common programme	2 140 000 u.a.
Beef production :	
Common programme	3 772 000 u.a.
Plant protein production :	
Common programme	2 572 875 u.a.

Done at Brussels, 22 July 1975.

For the Council

The President

G. MARCORA

ANNEX

SCIENTIFIC CONTENT OF THE PROGRAMMES

I. ANIMAL LEUCOSES

Avian leucosis and Marek's disease

(a) *Programme for the coordination of research on the differential diagnosis of Marek's disease and avian leucosis*

— Establishment of common criteria for the differential diagnosis of the two diseases by means of regular contacts between research workers in the Member States under the guidance of the Commission.

(b) *Common research programme on the mechanism of resistance to Marek's disease with a view to increasing the effectiveness of vaccination and to developing new methods to control the disease*

— Type of resistance

Vaccinal resistance : study of vaccination failures, genetic resistance : research on inheritance of resistance, vaccination to study genetic resistance and sensitivity to Marek's disease.

— Stimulation of resistance

Research into viral structural antigens and antigens associated with the virus of Marek's disease and the associated viruses of the herpes.

— Mechanisms of resistance

— antibodies :

— the rôle of antibodies in genetic resistance,
— the rôle of humoral antibodies in vaccinal immunity ;

— antibodies and immunity transmitted by the cell ;

— immunity transmitted by the cell and the rôle of macrophages : the rôle of these mechanisms as specific transmitters of vaccinal and genetic resistance ;

— interferon ;

— resistance of 'target' cells to 'mutation' : influence of malignant transformations of lymphoid cells on 'mutated' properties ;

— natural hormones : effect of stress.

Bovine leucosis

(a) *Programme for the coordination of research on improving the diagnosis of bovine leucosis* in order to arrive at better control measures by means of finding a simple, safe and standardized test for early diagnosis and by facilitating epizoological studies.

— Development of specific methods for the early diagnosis of bovine leucosis, including studies on the use of immunodiffusion, immunofluorescence, and radio-immune assay techniques.

— Differentiation between enzootic and other forms of bovine leucosis, including histological studies of tumours.

— Electrophoretic studies with a view to distinguishing between cells from chronic and acute bovine leucosis.

These studies will lead to :

— the standardization of histological staining methods ;

— the correlation of serological data with the various histopathological forms of the disease.

(b) *Common programme of research into virological and etiological aspects to identify and study the infectious agent of bovine leucosis*

— Laboratory methods

— Development of methods for the large-scale production and of methods for the quantification of C-type virus particles.

— Work on cell-lines and cultures, in vitro transmission, techniques of titration of the virus.

— Studies on the biochemical, biophysical and antigenic properties of the C-type virus particle and its rôle in the etiology of leucosis, in particular : various purification procedures, properties of reverse transcriptase, properties of 60-70S RNA and C-type particle proteins, hybridization, attempts to induce the disease with purified C-type virus particles.

— The genetics, pathogenesis and transmission of bovine leucosis

— Studies of 'masked transmission'

Investigations to determine whether there exists a latent period (no symptoms but virus present) and how this stage arises and changes, studies of the development of leucosis including the role of C-type particles, transmission by ova and sperm.

— Experiments to increase the virulence of the etiological agent, passage of cell-free and cell-containing leucotic material to new-born calves to shorten the incubation period, to concentrate the virus in the host and study the role of the agent, attempts to facilitate the passage from the haematological to the tumour phase, transmission accompanied by treatment with irradiation and immunosuppressive drugs.

— Transmission of bovine leucosis to other species.

II. EFFLUENT FROM INTENSIVE LIVESTOCK UNITS

(a) *Programme for the coordination of research to establish methods for the analysis of effluent from intensive livestock units applicable throughout the Community and to find solutions adapted to local situations*

— Comparison of methods of analysis ;

— Elimination of odours and pathogenic germs by means of chemical treatment in the storage containers ;

— Elimination of odours produced in the cattle shed ;

— Use of effluent for non-agricultural purposes.

(b) *Common research programme to intensify and complement research on the use of manure by spreading*

— Production and storage of semi-liquid manures including the elimination of pathogenic germs, reduction in nitrogen content and biological oxygen demand (BOD), study of the chemical characteristics of odours and the ventilation of storage containers, with a view to eliminating odours.

— Effects of the physical, chemical and microbiological characteristics of semi-liquid manure and in particular its content of fertilizing elements, organic matter and pollutants on yield and quality of the crop, soil characteristics, flora and fauna of the soil, quality of the water in relation to type of soil, amount of semi-liquid manure, treatment of manure, manuring season, climate, crop, method of spreading.

— Pollutant content

Effect of pollutants with particular reference to pathogenic germs and parasites, heavy metals (in particular copper), antibiotics, antiseptics and detergents.

— Establishment of a mathematical model : input will include essential factors such as the characteristics of the manure, type of soil, climatic factors and crops with a view to obtaining data on the ecological and economic consequences of different local decisions.

III. BEEF PRODUCTION

Common research programme to improve the efficiency of beef production, meat quality and carcass yield

1. To obtain a greater number of viable calves through :

   — better control of reproduction by :

      — reduced calving interval,
      — oestrus synchronization,
      — sex determination,
      — superovulation and egg transplantation

   and to consider the practical aspects of these methods in relation to livestock improvement and increased beef production ;

   — a reduction in calf mortality from perinatal intestinal infections, metabolic and respiratory diseases during and after birth ;

   — early breeding and the use of once-bred heifers intended for slaughter by promoting earlier gestation and induced calving without affecting viability of calves and quality of the carcass and meat, and by tackling the problems of nutritional and endocrinological control of growth, oestrus, parturition and lactation from the viewpoint of the effective application of the results of research in this field.

2. To improve meat quality and increase the weight of the carcass, through a better understanding of the genetic, physiological and nutritional factors influencing body development, by :

   — use of bulls for increased slaughter weights,

   — study of cattle behaviour ;

   — improvement of the nutritional efficiency of beef production ;

   — study of the nutritional and physiological factors influencing the growth and physical development of cattle with a view to the practical application of research results ;

   — standardization of the criteria for slaughter and carcass assessments, improvement of the study of carcass and meat quality in relation to the results of nutritional and genetic experiments ;

   — improvement of the utilization of the carcass by technological means, i.e. research into the influence of quartering, packing and cutting on meat quality.

3. To achieve a better understanding — particularly by coordinated programmes and comparative studies on selection criteria — of the suitability of the major European breeds used either alone or for cross-breeding with Friesians as regards fertility, early sexual maturity, ease of calving, genetic resistance to perinatal illness, maternal ability, growth, nutritional yield, characteristics of carcass and meat quality by means of the study of blood groups and genetic markers and for the purpose of selection for the production of good quality meat.

   This research must take into consideration the economic importance of beef production by taking account of biological and economic approaches with a view to improving the balance between milk and beef within the Community.

IV. PLANT PROTEINS

Common research programme for the qualitative and quantitative improvement of plant proteins

— methods and techniques for analysing and assessing proteins :

   — automation of analyses ;

   — effect of polyphenols on the energy balance and the digestibility of nitrogen ;

   — relationship between the *in-vivo* digestibility of proteins, on the one hand, and their physical solubility and solubilization by various enzymes on the other.

— Improvement of crops with a high protein content :

Research in the field of genetics and selection

— Fodder grasses and legumes :
  — the rôle of nitrogen-fixing bacteria,
  — methods for improving purple clover and lucerne,
  — effect of fertilizers,
  — the possibility of selecting fodder grasses for their protein content,
  — the production of high-protein fodder from grass.

— Seed legumes :
  — the rôle of nitrogen-fixing bacteria,
  — the study of proteins from various species,
  — pea improvement,
  — methodology of selection for protein content,
  — adaptation of new crops to European conditions.

— Study of the use of various European high-protein species.

— Cereal improvement :

— protein synthesis in cereals, its pathways and control, genetic variability and its consequences ;

— possibilities and methods of genetic improvement in autogamous cereals (common wheat, barley) :
  — selection from large collections,
  — crossings,
  — use of mutations,
  — study of selection sieves ;

— the genetics of maize, and in particular :
  — the methods of using Floury 2 and Opaque 2 genes,
  — modifier genes,
  — study of the relationship between high protein content, the quality of the proteins involved and seed yield.

I

(Information)

COUNCIL

Council resolution of 22 July 1975 on the technological problems of nuclear safety

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community;

Having regard to the Opinion of the European Parliament [1];

Having regard to the Opinion of the Economic and Social Committee;

Whereas the Commission has forwarded to the Council a communication and a general report on technological problems of nuclear safety;

Whereas it is necessary to keep the public adequately informed on this subject;

Whereas nuclear power has a considerable part to play in supplying energy to the Community;

Whereas the technological problems relating to nuclear safety, particularly in view of their environmental and health implications, call for appropriate action at Community level which takes into account the prerogatives and responsibilities assumed by national authorities;

Whereas, by aligning safety requirements, the national authorities responsible for nuclear safety and constructors and energy producers will be able to benefit from a harmonized approach to the problem at Community level;

Whereas nuclear safety problems extend beyond the frontiers not only of Member States but of the Community as a whole, and it is incumbent on the Commission to act as a catalyst for initiatives to be taken on a broader international plane,

HEREBY ADOPTS THIS RESOLUTION:

THE COUNCIL

1. requests the Member States as well as the licensing authorities and the safety and inspection authorities on the one hand, and the operators and constructors on the other, and finally the agencies responsible for applied research programmes to continue to collaborate effectively at Community level;

2. agrees to the course of action in stages indicated below by the Commission in respect of the progressive harmonization of safety requirements and criteria in order to provide an equivalent and satisfactory degree of protection of the population and of the environment against the risks of radiation resulting from nuclear activities and at the same time to assist the development of trade on the understanding that such harmonization should not involve any lowering of the safety level already attained; taking into account the state of industrial development in the respective families of

[1] OJ No C 128, 9. 6. 1975, p. 24.

high-power nuclear reactors, these stages involve listing and comparing the requirements and criteria applied and drawing up a balance-sheet of similarities and dissimilarities; formulating as soon as possible recommendations pursuant to the second indent of article 124 of the Euratom Treaty, and subsequently submitting to the Council the most suitable draft Community provisions;

3. agrees to strengthen Community efforts to coordinate applied research programmes in order to make the best possible use of the resources available in the Community and the Member States both technically and financially whilst avoiding as far as possible unnecessary duplication; these efforts shall be aimed at improving systematic exchanges of information, promoting concerted action and cooperation between specialized bodies and institutes and stimulating where appropriate the development of Community programmes;

4. approves of the methods used and advocated by the Commission, namely, meetings of working parties of specialized experts, exchanges of information on specific operational problems and analytical studies and syntheses with which these experts are associated;

5. notes that the measures described above may require appropriations in order to finance analyses and syntheses and the appropriate technical secretariat;

6. requests the Member States to notify the Commission of any draft laws, regulations or provisions of similar scope concerning the safety of nuclear installations in order to enable the appropriate consultations to be held at Community level at the initiative of the Commission;

7. requests the Member States to seek common positions on any problems concerning the harmonization of requirements and criteria and the coordination of research into nuclear safety being dealt with by international organizations;

8. requests the Commission to submit annual reports on the progress made and the Member States and the Commission to continue and strengthen their efforts to ensure that the public is given the best possible information about both national and Community action in the field of nuclear safety.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 22 August 1975

adopting an energy research and development programme

(75/510/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament [1];

Having regard to the Opinion of the Economic and Social Committee;

Whereas Article 2 of the Treaty assigns to the Community the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living; whereas Article 3 of that Treaty defines the aims of Community action to these ends;

Whereas energy research and development is an important factor in achieving these objectives;

Whereas the research and development activities which form the subject of the Decision therefore seem necessary in order to achieve certain Community objectives within the functioning of the common market;

Whereas the Treaty has not provided the powers necessary for these purposes;

Whereas the Council adopted the resolution concerning Community energy policy objectives for 1985 [2] on 17 December 1974;

Whereas the Council adopted the resolution on an initial outline programme of the European Communities in the field of science and technology [3] on 14 January 1974;

Having regard to the Opinion of the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

An energy research and development programme for the European Economic Community is hereby adopted in the form set out in the Annex hereto for a four-year period starting on 1 July 1975. The Annex forms an integral part of this Decision.

[1] OJ No C 76, 7. 4. 1975, p. 28.

[2] OJ No C 153, 9. 7. 1975, p. 1.

[3] OJ No C 7, 29. 1. 1974, p. 6

Article 2

The upper limit for expenditure commitments and for staff necessary for the implementation of this programme shall be 59 million units of account and 27 employees respectively for the duration of the programme.

The unit of account is defined in Article 10 of the Financial Regulation of 25 April 1973 (1) applicable to the general budget of the European Communities.

Article 3

The Commission shall be responsible for the implementation of this programme which shall be implemented in two stages. The first stage shall extend from 1 July 1975 until 31 December 1976 with an appropriation of 12 million units of account; the second shall extend from 1 January 1977 until 30 June 1979 with an appropriation of 47 million units of account. In the implementation of this programme the Commission shall be assisted by advisory committees on programme management set up for this purpose and shall keep the Scientific and Technical Research Committee (CREST) informed.

Article 4

The programme shall be reviewed at the end of the first year, after the Scientific and Technical Research Committee (CREST) has delivered its Opinion, so that any amendments to the programme resulting from that review can be implemented by the beginning of 1977 at the latest.

As long as there has been no decision to review the programme, the projects undertaken will be continued within the limits of the resources made available.

Article 5

The information resulting from the implementation of the programme defined in the Annex shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 (2) of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community.

Done at Brussels, 22 August 1975.

For the Council

The President

M. RUMOR

(1) OJ No L 116, 1. 5. 1973, p. 1.

(2) OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

INDIRECT ACTION

ENERGY RESEARCH AND DEVELOPMENT PROGRAMME

The aims of the programme are as follows:

1. ENERGY CONSERVATION

A maximum of 11·380 million units of account and a staff of six shall be assigned to this objective.

This programme covers the following sectors:

— improved insulation of buildings,

— use of heat pumps,

— urban transport,

— residual heat recovery,

— materials recyling,

— production of energy from waste,

— evaluation of the specific energy consumption of equipment, processes and techniques,

— development of methods for storage of secondary energy.

This work shall be carried out under contract.

2. PRODUCTION AND UTILIZATION OF HYDROGEN

A maximum of 13·240 million units of account and a staff of four shall be assigned to this objective.

This programme comprises the following projects:

Project A: Thermochemical production of hydrogen

Action:
1. Research into chemical and electrochemical reaction cycles of high potential efficiency in the conversion of heat energy into hydrogen energy;
2. Practical experiments on promising cycles.

Project B: Electrolytic production of hydrogen

Action:
1. Improvement of existing electrolytic production technology;
2. Study of the viability and economics of high-temperature and high-pressure electrolysis.

Project C: Utilization of hydrogen

Action:
1. Analysis of the potential applicability of hydrogen and of synthetic hydrogen-based fuels;
2. Development of safety specifications for the handling of hydrogen;
3. Improvement of the small-scale storage of hydrogen.

This work shall be carried out under contract.

3. SOLAR ENERGY

A maximum of 17·500 million units of account and a staff of six shall be assigned to this objective.

This programme comprises the following projects:

Project A: Solar heat collectors and their application to dwellings

Action:
1. Low-temperature use of solar energy for heating and cooling buildings;
2. Study of plane surface collectors;
3. Pilot applications to dwellings for domestic use;

Project B: Self-contained generating sets for the production of mechanical and/or electrical power

Action:
1. The use in medium and high temperature areas of solar heat to produce mechanical and/or electrical power;
2. Improvement of low-power groups (1 + 10 kw);
3. Pilot installation of 1 MWe.

Project C: Photovoltaic conversion

Action:
1. Development of alternative cells and improvement of existing cells;
2. Feasibility study on new concepts;
3. New methods of preparing semiconductor materials;
4. Silicon thin film;
5. Automation of panel production.

Project D: Photochemical, photoelectrochemical and photobiological processes

Action:
1. Basic studies on photochemical, photoelectrochemical and photobiological systems.

Project E: Photosynthetic production of organic matter

Action:
1. Choice and development of the most suitable energy crops for the different regions of Europe.

Project F: Data network relating to solar radiation

Action:
1. Collection, standardization and distribution of comprehensive data on number of hours of sunshine throughout the Community;
2. Definition of the implications of the large-scale use of solar energy.

This work shall be carried out under contract.

4. GEOTHERMAL ENERGY

A maximum of 13·000 million units of account and a staff of four shall be assigned to this objective.

This programme comprises the following projects:

Project A: Acquisition and collation of existing and new geothermal data

Action:
1. Collation of existing geothermal data;
2. Acquisition and collation of new additional geothermal data.

Project B: Improvement of methods of exploration

Action:
1. Improvement and/or adaptation of existing prospecting methods to specific geothermal requirements and development of new methods of prospecting and exploration.

Project C: Sources of hot water (low enthalpy)

Action:
1. Compilation of geothermal models in regions concerned;
2. Full-scale experimental verification of theoretical models (operation);
3. Utilization tests on sources of hot water for district and agricultural heating.

Project D: Steam sources (high enthalpy) and hot rocks

Action:
1. Construction of geothermal models in the areas concerned;
2. Improvement of measuring and drilling techniques for experimental work at high temperatures;
3. Stimulation of hot rocks to increase their permeability and extraction of heat from hot rocks.

Project E: Training of specialists

Action:
1. Training courses and detachments.

This work shall be carried out under contract.

5. SYSTEMS ANALYSIS: DEVELOPMENT OF MODELS

A maximum of 3·880 million units of account and a staff of seven shall be assigned to this objective.

This programme comprises the following action:

Action:
1. Static models (short term);
2. Dynamic sector models (medium/long term).

This work shall be carried out under contract.

No L 74/32 Official Journal of the European Communities 20. 3. 76

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 15 March 1976

adopting a research and training programme (1976 to 1980) for the European Atomic Energy Community in the field of biology — health protection ('radiation protection' programme)

(76/309/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission, submitted after consulting the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas it is in the interests of the Community to supplement, broaden and deepen the information necessary for an objective evaluation of the effects of and the dangers arising from ionizing radiations with regard to individuals and to plant, animal and human life;

Whereas the research dealt with by this Decision is an appropriate way of pursuing such action, and consequently it is in the common interest to adopt a multiannual programme in the field of radiation protection,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of radiation protection as defined in the Annex is hereby adopted for a five-year period beginning 1 January 1976.

Article 2

The upper limit for expenditure commitments and the maximum number of staff necessary for the execution of the programme shall be respectively 39 million units of account and 68 Community servants and 20 men/year for the infrastructure of the JRC, Ispra, in support of the Biology Group at Ispra, the unit of account being defined in Article 10 of the Financial Regulation of 25 April 1973 application to the general budget of the European Communities (3).

Article 3

On a proposal from the Commission the programme shall be reviewed during the first year to ensure, if necessary, its harmonization with the new direct action programme. Any amendments which result from this review will take effect from the beginning of 1977 at the latest.

As long as no decision to revise is taken, any projects which have been started will be continued within the limits of the funds granted.

Article 4

The Commission shall be responsible for the continuous supervision of the implementation of the

(1) OJ No C 280, 8. 12. 1975, p. 61.
(2) OJ No C 15, 22. 1. 1976, p. 19.

(3) OJ No L 116, 1. 5. 1973, p. 1.

programme in order to ensure that real coordination has been achieved and to decide whether developments in the situation or unforeseen research results necessitate changes to the programme. To this end it will report to the Council and to the European Parliament at the end of the second year of the programme and will propose, where appropriate, any amendments necessary.

Done at Brussels, 15 March 1976.

For the Council

The President

R. VOUEL

ANNEX

RADIATION PROTECTION PROGRAMME

(indirect action)

A maximum amount of 39 million units of account and a maximum staff of 68 Community servants and 20 men/year for the infrastructure of the JRC, Ispra will be allocated to this objective.

The aim of the work is to supplement, broaden and deepen the scientific and technical knowledge necessary for determining and keeping up to date the permissible radiation levels in man and the permissible level of contamination of the various components of the environment, and for the improvement of the practical organization of radiation protection by the Member States.

This aim includes studies on the path which radioactive contaminants follow in man and the environment, on the effects of radiation on living matter, and on dosimetric methods and instruments.

The activities shall be carried out mainly under contracts of association or shared-cost contracts and partly by the Commission Biology Group set up at the Ispra establishment.

COUNCIL DECISION

of 15 March 1976

adopting a research programme (1976 to 1978) for the European Economic Community in the field of reference materials and methods (Community Bureau of Reference)

(76/310/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, according to Article 3 (a) and (h) of the Treaty, the activities of the Community shall include *inter alia* the elimination, as between Member States, of quantitative restrictions on the import and export of goods, and of all other measures having equivalent effect, together with the approximation of the laws of the Member States to the extent required for the proper functioning of the common market;

Whereas, therefore, the research projects dealt with by this Decision appear necessary in order to achieve certain Community objectives within the functioning of the common market;

Whereas the Treaty does not provide the necessary powers for these purposes;

Whereas by its resolution of 14 January 1974 (3), the Council adopted an initial outline programme of the European Communities in the field of science and technology;

Whereas the Scientific and Technical Research Committee (CREST) has delivered an opinion on the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

A research programme for the European Economic Community to be carried out by the Community Bureau of Reference (CBR) in the field of reference materials and methods, as defined in the Annex, is hereby adopted for a period of three years beginning 1 January 1976.

Article 2

The upper limit for expenditure commitments and the maximum number of staff necessary for the execution of the programme shall be 2·7 million units of account and seven staff respectively, the unit of account being defined in Article 10 of the Financial Regulation of 25 April 1973 applicable to the general budget of the European Communities (4).

Article 3

On a proposal from the Commission the programme shall be reviewed during the first year to ensure, if necessary, its harmonization with the new direct action programme. Any amendments which result from this review will take effect from the beginning of 1977 at the latest.

As long as no decision to revise is taken, any projects which have been started will be continued within the limits of the funds granted.

Article 4

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by the Advisory Committee on Programme Management set up by the Council resolution of 19 November 1973. It shall submit a report to the Council on the implementation of the programme annually.

Article 5

The information resulting from the implementation of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 (5).

Done at Brussels, 15 March 1976.

For the Council

The President

R. VOUEL

(1) OJ No C 280, 8. 12. 1975, p. 62.
(2) OJ No C 35, 16. 2. 1976, p. 23.
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No L 116, 1. 5. 1973, p. 1.
(5) OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

REFERENCE MATERIALS AND METHODS

(Community Bureau of Reference)

(indirect action — non-nuclear projects)

Joint programme

A maximum amount of 2·7 million units of account and a maximum staff of seven Community servants will be allocated to this objective.

The aim of the Community programme shall be to strengthen, coordinate, harmonize and supplement national efforts in the field of reference materials and methods of measurement.

The aim shall include :

(a) the activities of a secretariat ;

(b) — characterization of materials,
- inventory and definition of requirements for new certified reference materials (CRM),
- technical specification of CRM,
- perfecting and preparation of CRM,
- organization of inter-laboratory comparisons,
- European certification of the technical characteristics of CRM,
- approval of laboratories.

Surveys and laboratory projects will be carried out under contract.

COUNCIL DECISION

of 15 March 1976

adopting a research programme (1976 to 1980) for the European Economic Community in the environmental field (indirect action)

(76/311/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living, the objectives of the action performed to this end by the Community are set out in Article 3 of the Treaty;

Whereas environmental research can contribute to the implementation of these objectives;

Whereas, therefore, the research projects dealt with by this Decision seem necessary in order to attain certain objectives of the Community, within the framework of the common market;

Whereas the Treaty does not provide the necessary powers for these purposes;

Whereas in its declaration of 22 November 1973 (3), the Council approved the objectives and principles of an environmental policy within the Community and a general description of the projects to be undertaken at Community level;

Whereas by its resolution of 14 January 1974 (4), the Council adopted an initial outline programme of the European Communities in the field of science and technology;

Whereas the Scientific and Technical Research Committee (CREST) has delivered an opinion on the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

A research programme for the European Economic Community in the environmental field as defined in the Annex is hereby adopted for a five-year period beginning 1 January 1976.

Article 2

The upper limit for expenditure commitments and the maximum number of staff necessary for the execution of the programme shall be 16 million units of account and 10 staff respectively, the unit of account being defined in Article 10 of the Financial Regulation of 25 April 1973 applicable to the general budget of the European Communities (5).

Article 3

On a proposal from the Commission the programme shall be reviewed during the first year to ensure, if necessary, its harmonization with the new direct action programme. Any amendments which result from this review will take effect from the beginning of 1977 at the latest.

As long as no decision to revise is taken, any projects which have been started will be continued within the limits of the funds granted.

Article 4

The programme shall be subject to review, on a proposal from the Commission, to adapt it to developments in research requirements and to the needs of the new environmental programme. This review will be prepared in 1977 and will take effect at the beginning of 1978.

Article 5

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by the Advisory Committee on Environmental Research Programme Management, set up by the Council resolution of 10 December 1973. It shall submit a report to the Council and to the European

(1) OJ No C 280, 8. 12. 1975, p. 59.
(2) OJ No C 35, 16. 2. 1976, p. 29.
(3) OJ No C 112, 20. 12. 1973, p. 1.
(4) OJ No C 7, 29. 1. 1974, p. 6.
(5) OJ No L 116, 1. 5. 1973, p. 1.

Parliament on the implementation of the programme annually.

Article 6

The information resulting from the implementation of the programme shall be disseminated in accordance with Regulation (EEC) No 2380/74 [1].

Done at Brussels, 15 March 1976.

For the Council

The President

R. VOUEL

ANNEX

ENVIRONMENTAL RESEARCH PROGRAMME (1976 to 1980)

(indirect action — non-nuclear projects)

A maximum amount of 16 million units of account and a maximum staff of 10 Community servants will be allocated to this objective.

The main aim of the research will be to acquire the scientific and technical know-how necessary for implementation of the environmental programme of the Community. It will cover the following four areas :

1. research designed to establish criteria (exposure/effect ratios) for pollutants and potentially toxic chemicals ;
2. research and development on environmental information management, with particular reference to chemicals likely to contaminate the environment (ECDIN project) ;
3. research and development on the reduction and prevention of pollution and nuisances, including the application of 'clean' technologies ;
4. research and development related to the protection and improvement of the natural environment.

Certain studies of a general nature may also be undertaken. Research will be carried out by way of contracts.

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[1] OJ No L 255, 20. 9. 1974, p. 1.

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II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 25 March 1976

adopting a research and training programme (1976 to 1980) for the European Atomic Energy Community in the field of fusion and plasma physics

(76/345/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas in view of the considerable efforts needed to reach the application stage of controlled thermonuclear fusion, which could be of benefit to the Community, particulary in the wider context of the security of its long-term energy supplies, the various stages of development of the work hitherto undertaken in this field should continue on a joint basis;

Whereas the progress achieved during the third five-year programme illustrates, particulary in the case of the Tokamak process, the need for larger, more complex and more costly devices which no single associated laboratory can contemplate building unaided;

Whereas the research proposed by the Commission constitutes an appropriate means of pursuing such action and it is, consequently, in the common interest to adopt a multiannual programme in the field of fusion and plasma physics;

Whereas it is important that the Community should continue to encourage both the construction of certain equipment concerned with operations accorded priority status, by granting a preferential rate of participation in the expenditure on such equipment, and the implementation of major projects carried out jointly by all the associated laboratories;

Whereas, furthermore, the mobility of staff between organizations cooperating in the execution of the programme should be promoted,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of fusion and plasma physics as defined in the Annex is hereby adopted for a five-year period beginning 1 January 1976.

Article 2

The upper limit for expenditure commitments and the maximum number of staff required for the execution of this programme shall be 124 million units of account and 113 Community employees respectively, with the unit of account as defined in Article 10 of the Financial Regulation of 25 April 1973 applicable to the general budget of the European Communities (3).

(1) OJ No C 7, 12. 1. 1976, p. 43.
(2) OJ No C 35, 16. 2. 1976, p. 19.

(3) OJ No L 116, 1. 5. 1973, p. 1.

Article 3

The Commission will submit to the Council in 1978 a review proposal designed to replace the present programme with a new five-year programme as from 1 January 1979.

Done at Brussels, 25 March 1976.

For the Council

The President

M. MART

ANNEX

FUSION AND PLASMA PHYSICS

1. The subject matter of the programme which will be executed shall be :
   - — general physics in the sector concerned, in particular studies of a basic character or relating to confinement with suitable devices and to methods for producing and heating plasma ;
   - — research into the confinement, in closed configurations, of plasma of widely varying density and temperature ;
   - — production of and research into plasma of high and very high density ;
   - — improvement of diagnostic methods ;
   - — investigation into technological problems connected with current research and problems relating to thermonuclear reactor technology.

   This work shall be carried out by means of association or limited duration contracts designed to yield the results neeessary for the implementation of the programme.

2. The programme set out in point 1 shall be part of a long-term cooperative project embracing all work carried out in the Member States in the field of fusion and plasma physics. It is designed to lead in due course to the joint construction of prototypes with a view to their industrial-scale production and marketing.

3. A maximum amount of 124 million units of account and a maximum number of 113 employees shall be allocated to this objective. The amount in question is intended to cover :
   - — expenditure on equipment concerned with operations accorded priority status ;
   - — the cost of staff mobility ;
   - — other expenditure relating to operations to be carried out under the programme.

4. Within the upper limit of 124 million units of account :
   (a) a maximum amount of 39 million units of account shall be allocated to the financing of the operations specified in paragraph 5, a standard preferential rate of participation of about 45 % being applied. In return, all partner associations shall have the right to take part in the experiments carried out with this equipment ;
   (b) a maximum amount of four million units of account shall be set aside for administration costs and for expenditure intended to ensure the mobility of research staff of the Member States necessary if they are to work in organizations cooperating in the implementation of the programme ;
   (c) the amount not set aside for the operations and expenditure referred to in (a) and (b) shall form the upper limit of financial participation by the Community in other expenditure incurred by the associations. This participation shall be at a standard rate of about 25 %.

5. After conducting a technical examination of the various projects, the Commission may, within the following upper limits, finance at a rate of about 45 % the operations mentioned below, which are accorded priority status by the liaison group :

	(million units of account)
— Tokamak systems and JET	50
— High-beta systems	20
— Low-beta systems (Stellarator)	5
— Heating and injection processes	12
— Technology	18
— Very high density processes	2

Each of these amounts shall constitute the maximum expenditure to be taken into consideration for each of the above priority operations. Moreover, the total amount for all operations shall not exceed 86·7 million units of account.

COUNCIL DECISION

of 22 July 1976

adopting a series of joint projects on data processing

(76/632/EEC)

THE COUNGIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council agreed, in its resolution of 15 July 1974 on a Community policy for data processing (3), with a view to giving a Community orientation to policies for encouraging and promoting data processing, to adopt, on a proposal from the Commission, joint projects of European interest in the field of data processing applications;

Whereas, to this end, priority should be given to projects likely to help to meet the needs of users and to increase the ability of the European-based data processing industry to satisfy these needs on the European and world markets;

Whereas, in the interests of public health in the Community, better determination of the compatibility of organs and blood groups is required, and whereas a data processing system for making such comparisons could help to save more human lives;

Whereas, in its resolution on 26 November 1974, the Council made particular reference to the need to establish an inter-institutional computerized legal information system, and to the advantage of making Community law fully accessible to the Member States and to the need to define a development plan in order to ensure that computerized legal inform · ɔn systems under study or being set up in the Member States and in the institutions of the Communities are compatible;

Whereas improved computer-aided design techniques could strengthen the European electronics industry and could help to increase productivity in the construction industries;

Whereas the aforementioned projects appear necessary for the development of the common policy in the field of data processing;

Whereas the Treaty establishing the European Economic Community has not provided the necessary powers,

HAS DECIDED AS FOLLOWS:

Article 1

A series of three joint data processing projects is hereby adopted covering the following studies:

1. Study on the setting up of a data bank for matching organs and blood (nine months);

2. Study of requirements in the field of legal document retrieval systems in the Community (18 months);

3. Two development studies in computer-aided design (12 and 18 months respectively).

These projects are defined in Annexes I to III.

(1) OJ No C 239, 20. 10. 1975, p. 16.
(2) OJ No C 263, 17. 11. 1975, p. 44.
(3) OJ No C 86, 20. 7. 1974, p. 1.

Article 2

The appropriations necessary for carrying out these projects shall be entered in the budget of the European Communities.

Article 3

The Commission shall be responsible for carrying out the projects. It shall be assisted by the Advisory Committee on the Joint Data Processing Projects.

The Commission shall submit a report to the Council annually.

Done at Brussels, 22 July 1976.

For the Council

The President

L. J. BRINKHORST

ANNEX I

Study on the setting up of a data bank for matching organs and blood

Content of the project

Phase 1: Analysis of the present mode of operation in the existing transplant organizations and the drawing up, in collaboration with the users, of specifications for running a system for matching kidneys and blood within a common scheme.

Phase 2: After the specifications have been agreed with the users, data processing consultants will investigate the various data processing alternatives and recommend an appropriate system. During this phase, the question of the location of the necessary computer or computers will also be examined and recommendations made.

Phase 3: Detailed specifications for the system will be prepared, including the financial implications of the installation, staffing and running costs of the foundation responsible for directing this common scheme.

ANNEX II

Study of requirements in the field of legal document retrieval systems in the Community

Content of the project

In-depth study of requirements

1. This development study in the field of Community legal documentation will embrace the following tasks:

1.1. An inventory of the data processing or other systems used in the legal documentation centres of the Member States and a survey of their future development plans;

1.2. Investigation and analysis of users' requirements (institutions, Government departments, professions and others) with reference to the information, the type of content, the presentation, etc.;

1.3. Systematic collation and synthesis of the information on technical and documentation standards used for the exchange of files and selective information at European and international level in this field, as a basis for the decisions to be taken on common standards;

1.4. Proposal of a long-term development programme for the gradual introduction of systematic link-ups at Community level with access in Member States, covering technical alternatives and the likely effects of their adoption. If the need for a

network becomes apparent, its technical characteristics should be studied, taking into account the possibility of using networks such as Euronet and Cost 11 which are supported by the Community institutions;

1.5. Formulation of recommendations based on test-evaluations for the development of software suited to the application characteristics and the requirements of document retrieval: such software may have wider applications then the project itself;

1.6. Formulation of specific proposals for the development in priority phases of systems in the Community, including estimates of cost and time-scale for each phase.

2. These proposals could cover an extension and development of the Commission's own system with a view to meeting the broader requirements of the Community in all the official languages, as well as the corresponding technical extensions and developments in the Member States, in order to ensure effective access to Community law.

ANNEX III

Development studies in computer-aided design (CAD)

1. **Content of Study Project No 1**

Study of logic circuit design aids

The study programme will embrace the following tasks:

1.1. To identify and evaluate work on logic circuit design aids taking place in industry, universities and research centres;

1.2. To list and attempt to give a qualitative assessment of all software in use or under development (involving representative European industrial organizations);

1.3. To attempt to identify the gaps in software development;

1.4. To give advice on the portability of software;

1.5. To identify the problems of interfacing the design aid packages to be developed with existing and well-established packages for chip design, PCB design and thick/thin film design as well as simulation and optimization;

1.6. To examine the hardware necessary to support such systems and communication interfaces;

1.7. To evaluate the economic advantages of using existing techniques;

1.8. To examine possible data structures;

1.9. To make recommendations concerning further work and the probable advantages therefrom;

1.10. To evaluate economic factors as follows:

Although it is the purpose of this study to examine the viability of electronic aids for the logic circuit designer, it would nevertheless be unrealistic to propose it, unless there were good prospects for the development of such aids. The economic benefits to be gained from the application of CAD to logic circuit design could be considerable. Design and perfection of a synchronous logic system for transfer lines and machine tools, etc., can, with present methods, take years. CAD could reduce this period to a few months or even less. Moreover, the final design would produce a more reliable and near optimal result, thereby reducing the cost of maintenance and equipment failure. The savings could run into millions of units of account, and one of the aims of the study should be to estimate the precise amount.

1.11. The economic benefits of collaboration over the study are to be derived from the elimination of duplication and the problems of communication arising out of the language barrier.

2. **Content of Study Project No 2**

Study of the relationship to construction management

2.1. The aim of the study will be to identify the sources of expertise and existing systems, to define the areas common to the variety of uses envisaged, thereby testing the feasibility of the approach outlined.

The ultimate objective will be to recommend how further development should proceed if it appears feasible and desirable.

2.2. The study should embrace industry as well as research and development organizations throughout the Community and should cover the following areas in three phases with interim reports to be submitted at the end of phases 1 and 2 and a final report after phase 3.

2.3. Phase 1

1. To identify and list existing sources of expertise.
2. To examine existing systems and those under development.
3. To identify gaps in software development.
4. To consider the portability of software.

Phase 2

5. To examine hardware and system response requirements.
6. To examine the relationship between system design and the scope of the application programme.
7. To examine the economic benefit for the system of handling application programmes which are independent of the data base.

Phase 3

8. To produce broad outline systems specifications and development strategies.

COUNCIL DECISION

of 22 July 1976

setting up an Advisory Committee on the Joint Data Processing Projects adopted in Council Decision 76/632/EEC

(76/633/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft Decision submitted by the Commission,

Whereas the establishment of a Community policy on data processing is one of the objectives of the Community, as recognized in the Council resolution on 15 July 1974 [1];

Whereas, in order that the Commission may have the necessary data for the satisfactory implementation of the projects adopted by the Council as part of this policy, there must be provision for enlisting the aid of a body consisting of representatives of the Member States;

Whereas an Advisory Committee on the Joint Data Processing Projects adopted in Decision 76/632/EEC [2] should be set up for this purpose,

HAS DECIDED AS FOLLOWS:

Article 1

An Advisory Committee on the Joint Data Processing Projects, hereinafter called 'the Committee', is hereby set up.

The Committee shall consist of representatives who are appointed by the Member States and who may call on the assistance of experts or advisers according to the nature of the project. The Committee shall be chaired by a representative of the Commission.

The Commission shall provide the secretariat services for the Committee.

The Committee shall adopt its own rules of procedure.

Article 2

The Committee shall assist the Commission in the execution of the joint data processing projects adopted in Decision 76/632/EEC.

The Committee shall be consulted in particular on the following:

— choice of project directors,

— choice of the organizations to which the work is to be entrusted,

— composition and responsibilities of the technical subcommittees.

Article 3

For each of the projects adopted by Decision 76/632/EEC a technical subcommittee shall be set up to assist and advise the project director in carrying out the project. The Committee shall, at its request, be assisted by the technical subcommittees and the project directors.

Done at Brussels, 22 July 1976.

For the Council

The President

L. J. BRINKHORST

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[1] OJ No C 86, 20. 7. 1974, p. 1.

[2] See page 11 of this Official Journal.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 21 December 1976

reviewing the energy research and development programme adopted by Decision 75/510/EEC

(77/54/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament [1],

Having regard to the opinion of the Economic and Social Committee [2],

Whereas Article 4 of Council Decision 75/510/EEC of 22 August 1975 adopting an energy research and development programme [3], lays down that the programme shall be reviewed at the end of the first year;

Whereas it is also desirable, in order to ensure optimum implementation of the programme, to provide for the possibility of modifying the distribution of the funds allocated to the various objectives;

Having regard to the opinion delivered by the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

The following paragraph shall be added to Article 3 of Decision 75/510/EEC:

'In implementing the programme, the Commission may, after consulting the competent ACPMS and the CREST subcommittee on Energy R & D, and within the limits of 5 to 10 % of the original appropriations as shown in the Annex, carry out transfers between the funds allocated to the various objectives, in the event that, at the beginning of the last year of implementation of the programme, the appropriations available for certain of the objectives cannot be used to advantage, while for other objectives the funds are clearly inadequate in regard to possible developments.'

Article 2

As from 1 January 1977 the Annex to Decision 75/510/EEC shall be replaced by the Annex to the present Decision.

Done at Brussels, 21 December 1976.

For the Council

The President

R. LUBBERS

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(1) OJ No C 293, 13. 12. 1976, p. 17.
(2) Opinion delivered on 24 November 1976 (not yet published in the Official Journal).
(3) OJ No L 231, 2. 9. 1975, p. 1.

ANNEX

INDIRECT ACTION

ENERGY RESEARCH AND DEVELOPMENT PROGRAMME

The aims of the programme are as follows :

1. ENERGY CONSERVATION

A maximum of 11·380 million units of account and a staff of six shall be assigned to this objective.

This programme covers the following sectors :

— improved insulation of buildings,
— use of heat pumps,
— urban transport,
— residual heat recovery,
— materials recycling,
— production of energy from waste,
— evaluation of the specific energy consumption of equipment, processes and techniques,
— development of methods for storage of secondary energy.

This work shall be carried out under contract.

2. PRODUCTION AND UTILIZATION OF HYDROGEN

A maximum of 13·240 million units of account and a staff of four shall be assigned to this objective.

This programme comprises the following projects :

Project A : Thermochemical production of hydrogen

Action : 1. Research into chemical and electrochemical reaction cycles of high potential efficiency in the conversion of heat energy into hydrogen energy.

2. Practical experiments on promising cycles.

Project B : Electrolytic production of hydrogen

Action : 1. Improvement of existing electrolytic hydrogen production technology.

2. Study of the viability and economics of high-temperature and high-pressure electrolysis.

Project C : Utilization of hydrogen

Action : 1. Analysis of the potential applicability of hydrogen and of synthetic hydrogen-based fuels.

2. Development of safety specifications for the handling of hydrogen.

3. Improvement of the small-scale storage of hydrogen.

4. Studies related to the problems of industrial-scale (medium-sized) storage of hydrogen.

5. Studies of the possibility of using existing pipelines for the distribution of hydrogen.

This work shall be carried out under contract.

3. SOLAR ENERGY

A maximum of 17·500 million units of account and a staff of six shall be assigned to this objective.

This programme comprises the following projects :

Project A : Solar heat collectors and their application to dwellings

Action : 1. Low-temperature use of solar energy for heating and cooling buildings.

2. Study of plane surface collectors.

3. Pilot applications to dwellings for domestic use.

Project B : Self-contained generating sets for the production of mechanical and/or electrical power

Action : 1. The use in medium and high temperature areas of solar heat to produce mechanical and/or electrical power.

2. Improvement of low-power groups (1 + 10 kw).

3. Pilot installation of 1 MWe.

Project C : Photovoltaic conversion

Action : 1. Development of alternative cells and improvement of existing cells.

2. Feasibility study on new concepts.

3. New methods of preparing semiconductor materials.

4. Silicon thin film.

5. Automation of panel production.

6. New or improved encapsulating materials.

7. Data collation.

Project D : Photochemical, photoelectrochemical and photobiological processes

Action : 1. Basic studies on photochemical, photoelectro-chemical and photobiological systems.

Project E : Photosynthetic production of organic matter

Action : 1. Choice and development of the most suitable energy crops for the different regions of Europe.

Project F : Data network relating to solar radiation

Action : 1. Collection, standardization and distribution of comprehensive data on number of hours of sunshine throughout the Community.

2. Definition of the implications of the large-scale use of solar energy.

This work shall be carried out under contract.

4. GEOTHERMAL ENERGY

A maximum of 13 million units of account and staff of four shall be assigned to this objective.

This programme comprises the following projects :

Project A : Acquisition and collation of existing and new geothermal data

Action : 1. Collation of existing geothermal data.

2. Acquisition and collation of new additional geothermal data.

Project B : Improvement of methods of exploration

Action : 1. Improvement and/or adaptation of existing prospecting methods to specific geothermal requirements and development of new methods of prospecting and exploration.

Project C : Sources of hot water (low enthalpy)

Action : 1. Compilation of geothermal models in the regions concerned.

2. Full-scale experimental verification of theoretical models (operation).

3. Utilization tests on sources of hot water for district and agricultural heating.

Project D : Steam sources (high enthalpy)

Action : 1. Construction of geothermal models in the areas concerned.

2. Improvement of measuring and drilling techniques for experimental work at high temperatures.

3. Study of new stimulation methods.

Project E : Hot dry rocks

Action : 1. Studies and experiments on fracturation.

2. Studies and experiments on heat extraction.

Project F : Training of specialists

Action : 1. Training courses and detachments.

This work shall be carried out under contract.

5. SYSTEMS ANALYSIS : DEVELOPMENT OF MODELS

A maximum of 3·880 million units of account and a staff of seven shall be assigned to this objective.

This programme comprises the following action :

Action : 1. Static models (short term).

2. Dynamic sector models (medium/long term).

This work shall be carried out under contract.

COUNCIL DECISION

of 21 December 1976

adopting a programme for the European Atomic Energy Community and the European Economic Community in the field of scientific and technical education and training

(77/55/EEC, Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission, submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (3), advocates the progressive implementation of a new Community research and development policy;

Whereas the research programmes of the European Atomic Energy Community should be supplemented by a programme in the field of scientific and technical education and training;

Whereas the Council, seeking to attain the objectives set out in Articles 2 and 3 of the Treaty establishing the European Economic Community, has also adopted research programmes in non-nuclear fields in accordance with the provisions of Article 235 of the Treaty;

Whereas a programme of scientific and technical education and training would appropriately supplement these programmes and thus help in attaining the abovementioned objectives;

Whereas the Treaty establishing the European Economic Community does not provide the necessary powers;

Whereas the training of young scientific and technical staff and the development of qualified specialists in the areas covered by the research programmes adopted by the Council is an essential Community requirement for the progressive implementation of its research and development policy;

Whereas an opinion was delivered by the Scientific and Technical Research Committee (CREST),

HAS ADOPTED THIS DECISION:

Article 1

A programme in the field of technical and scientific education and training, as set out in the Annex to this Decision, is hereby adopted for a four-year period from 1 January 1977.

Article 2

The upper limit for expenditure commitments and for staff required for the implementation of the programme shall be 4·6 million units of account and six officials, the unit of account being that defined in Article 10 of Financial Regulation 73/91/ECSC, EEC, Euratom of 25 April 1973 applicable to the general budget of the European Communities (4).

Article 3

The Commission shall be responsible for the implementation of the programme.

Done at Brussels, 21 December 1976.

For the Council

The President

R. LUBBERS

(1) OJ No C 293, 13. 12. 1976, p. 15.
(2) OJ No C 299, 18. 12. 1976, p. 19.
(3) OJ No C 7, 29. 1. 1974, p. 2.
(4) OJ No L 116, 1. 5. 1973, p. 1.

ANNEX

The programme in the field of scientific and technical education and training applies to those areas which are the subject of nuclear or non-nuclear Community research programmes. It comprises the following measures :

1. Award of grants for scientific research work at various levels of training (post-graduate dissertations, Ph.D theses, post-doctorate research). The grants are awarded for research work which must be carried out in a Community country other than the applicant's country of origin or country of permanent residence. Eligible for these grants are science students, holders of higher education qualifications or doctorates in the various branches of science and engineers — including scientists and engineers working in industry — in principle, from the Member States of the Community.

2. Financing of advanced further training courses in areas of particular importance to the Community's research and development policy.

ESTABLISHMENT OF A RESEARCH PROGRAMME

'Safety in mines'

1. INTRODUCTION

Article 55 of the European Coal and Steel Community Treaty deals with the promotion and financing of technical and economic research relating to the production and increased use of coal and steel and research for improved occupational safety in the coal and steel industries of the Community.

Since 1969 a total of 2 613 566 units of account has been allocated in pursuance of Article 55 to enable research projects directly related to mine safety to be undertaken. The aid has been mainly for research in the fields of 'underground fires', 'explosion-arresting barriers' and 'rescue of trapped miners' and currently work is being done on the three subjects in four countries of the Community. Research so far has shown benefits but further research is still desirable in these three fields. In addition to this well-established research, financial aid was made available in 1976 for five further projects related to safety in mines. These broke new ground in the subjects covered and related to research on frictional ignitions, the use of explosives, the propagation and effects of explosions and the safety of electrical apparatus.

Up to the present projects relating to mine safety have been proposed yearly, in an individual manner, without recourse to an overall programme.

In addition to this direct safety research, Direction 'Coal' of Directorate XVII, 'Energy', in accordance with its 'medium-term research aid programme for coal', financially aids technical and economic research, due account being taken of the safety factors which are closely linked to all the techniques and technologies studied. The Mines Safety and Health Commission is also concerned with all facets of mine safety and operates by way of exchanges of practical experiences. Its mandate enables it to recommend that certain researches be undertaken and the results of all pertinent research are brought to the notice of the Commission as they become available.

Besides financially aiding safety research the Community aids research concerning health in mines which, in general, covers all aspects of mine dusts and noxious vapours. Since 1957 there have been three 'health in mines ' programmes, each of five years duration and involving total aid of 12 900 000 units of account, the current programme being scheduled for completion in 1976. Having these medium-term programmes has enabled all concerned to plan and work within known parameters of time and available finance resulting generally in well coordinated research.

In the light of the world energy crisis the Community needs to maintain supplies of indigenous fuel. To this end, in the mining sphere, increased technological progress will be necessary with which increased safety must go hand in hand to ensure mining methods and machines are made as safe as possible and to create the essentially safe working environment so necessary to attract and keep the requisite manpower.

Thus, on several counts, the setting up of a 'medium-term mine safety research programme' is desirable. The programme is needed to ensure adequate research into safety problems, both current and those which will be thrown up by advances in technology, and to ensure that the requisite research can be adequately and continuously programmed as would be the case when parameters of time and available finance are fully known.

The need to harmonize all research is a prerequisite and in the formulation and operation of a programme 'safety in mines' due account will need to be taken of research undertaken by other bodies, both within and outside the Community, particularly that of manufacturers of equipment for mining.

2. THE SAFETY PROGRAMME

I. General

A programme of safety research should cover not only those aspects of mining relating to potential disasters but also those aspects which, although more

often resulting in a single casualty, in the long term take a greater toll of life and limb. It may be that the latter will necessitate a different approach. Always, in the field of safety in mining, one is confronted not only with new problems but also the evolution of old problems, and any safety programme should seek to identify current and future problems bearing in mind particularly changes in methods and machinery. The aim should be to 'build in' safety with new techniques and to adopt a system readily identifying dangers not initially apparent so that they can be countered without delay should they arise. Finally, in the context of these general terms, any research should be of such a nature that tangible results are likely to emerge and these should be translated into terms of practical application to the mining situation.

Problems already posed by increased mechanization in all its forms, concentration of workings, continuity of working, the working of seams having inferior characteristics, the increase in distances covered by all forms of underground haulage and transport and the use of all forms of conveyance to maximum capacities are likely to intensify, so requiring increased safety research and control to maintain a safe and constantly improving working environment.

The formulation of a mine safety programme and the framework of topics for research has been discussed with the Committee of Producers and Workers on Industrial Safety and Medicine, the Restricted and Plenary Committees of the Mines Safety and Health Commission and national organizations of each country within the Community having intimate knowledge of current problems and developments. A noteworthy feature has been the expressed unanimity of the need for such a programme and the similarity of views and requirements expressed by the various parties. A programme should be defined within a broad framework enabling all the known and anticipated safety problems to be accommodated and sufficiently flexible to cater for unforeseen problems, past experience having shown that such problems do arise.

Preparation of a programme has shown that the choice of research topics for past and current financial aid has been justified as further projects in the same fields figured prominently in the suggestions made.

II. Contents of programme

It is proposed that a 'research programme on mine safety' be formulated under the following main headings under which desirable topics for research are indicated.

(a) *Fires and underground combustion*

As indicated, research in this field has received financial assistance, past and current research being concerned with underground roadway fires, particularly those involving long items of plant such as conveyors and electric cables, causes and early detection of spontaneous combustion and methods of rendering roadway linings fire resistant. Work on these subjects should continue, due regard being taken of new materials, products and developments underground so that suitable criteria can be developed for testing their suitability for mining use as regards fire risk and products of combustion in the event of fire.

In addition research would be related to:

the efficiency of existing methods of fire detection and suppression and where necessary the development of new methods;

the development of apparatus and systems for the monitoring of mine atmospheres for the early detection of combustion;

the fire hazard associated with the use of diesel engines underground;

fundamental aspects of the oxidation of coal relating to spontaneous combustion;

the effect of fires on the ventilation of mines.

(b) *Explosions*

In this field there is the need to continue research on the different types of explosion-arresting barriers with the aim of providing efficient and practical barriers to meet all mining situations.

Further work on the development and practical application of triggered barriers should be continued and to this end research would need to:

compare different triggered barriers;

evaluate the performance of these barriers in roadways having a large cross section, in roadways having obstructions in them and in low wide roadways.

Besides work on barriers, under this heading research would be related to:

the development of methods for prevention and safe suppression of firedamp ignitions resulting from frictional sparking;

the determination of parameters for inflammability of hybrid mixtures of inflammable gas and dusts and the inflammability of coal dust as a function of volatile content;

the safety of diesel engines used underground where inflammable atmospheres may exist.

(c) *Rescue*

Again, as with the first two main headings, subjects already aided financially should be continued to develop satisfactory means of rescuing trapped miners involving locating, communicating with, contact and rescue.

Further research would related to:

the design, development, construction and maintenance of self rescuers;

determination of the parameters for use of self-contained breathing apparatus.

(d) *Surveillance, telemetry, remote control, automation and communication*

Under this broad heading research work would relate to:

the design, development and application of surveillance instruments to monitor and safeguard all aspects of the underground environment;

the development of systems for remote monitoring and control of the underground environment using the instruments developed;

the study of automated and remotely-controlled systems to assess their performance and safety;

the development of systems of underground communication both for all the benefits accruing from immediate, efficient communication and also to ensure contact with persons working alone or remote from others.

(e) *Methods of working*

Under this very general heading would come all aspects related to current and possible methods of exploitation and would include research on the following:

the safety aspects of methods and machinery;

underground mining waters, with the aim of determining the origin of waters and relating waters to the presence of old workings;

rockbursts in all their aspects;

strata stability, particularly in pillar and room workings;

materials for consolidating and improving adverse strata conditions and their conditions of use;

the development of methods of sealing mine areas and roadways, particularly in adverse circumstances and with emphasis on achieving satisfactory sealing from a position remote from the siting of the seal;

mining explosives, to develop and ensure the use of satisfactory explosives for present mining circumstances.

In this category would be included research related to noise, vibration, lighting and climate in mines, associated with which would be requisite studies on mine ventilation.

(f) *Electricity*

In addition to the proposed research on intrinsic safety and flameproof enclosures further work on the safety of electrical networks and static electricity would be done and this would include:

the study of fault and leakage currents and rapid tripping circuit breakers;

the study of all aspects of static electricity particularly in the context of the greater use of synthetic materials in mines.

(g) *Metallurgy*

Under this heading would be grouped all research work of a metallurgical character. Apparatus used in the mining environment is

subject to large and varying stresses, the safety of the whole depending on the strength of the individual parts. Research would be devoted to:

the study of the behaviour of ropes, chains and chain connectors as used for conveying, haulage and winding operations in mines, the determination of suitable operating parameters and the design and development of relevant non-destructive testing equipment.

In this section would be included the study of light alloys to determine, if possible, satisfactory means of eliminating or controlling their incendivity.

(h) *Accidents and accident information*

Safety in the mining environment is often a function of the individual and the application of measures resulting from studies of incidents and accidents.

Research into aspects covering these would include:

investigation into systems and methods of presenting data relating to accident prevention, to determine the most efficient and beneficial method;

the study of 'common' accidents by the use of questionnaire machines which would enable the many minor accidents which occur daily, and on which no or little information is presently collected, to be studied.

One aspect thrown up by present accident statistics is the high incidence of accidents occuring in situations relating to underground haulage and transport. This subject demands prompt attention and studies would be undertaken to improve existing systems and to try to evolve better and safer systems of both men and materials transport in all situations.

3. UNDERTAKING OF RESEARCH WORK

The research work under the safety programme would, in general, be undertaken by the mining research institutes in the countries of the Community. These institutes have, over many years, undertaken research into mine safety and health problems and are fully capable of doing any work proposed by the safety programme. Research would be allocated to the institutes according to their particular facilities and general direction of research so that the programme would be completed in the most efficient and beneficial manner.

4. PROCEDURES

After a research programme proposed by the Commission has been satisfactorily considered by the Consultative Committee of the European Coal and Steel Community and has received the assent of the Council of the European Communities the necessary executive and consultative procedures are adopted by the Commission to ensure fulfilment of the programme.

Three advisory committees, the Research Committee, the Committee of Producers and Workers on Industrial Safety and Medicine and the Committee of Government Experts, all composed of members having the necessary expertise, offer pertinent advice to the executive when projects are being considered.

On acceptance of a project by the Commission it is controlled by a relevant contract detailing all requirements including periodic submission of technical reports. These are discussed by working groups or experts committees whose members have specialized knowledge which enables them to offer relevant advice.

This system has worked well over a considerable period of time and it is proposed that it be extended to the safety programme. The number of groups and committees would be as few as possible and the members within the bodies kept to a satisfactory minimum.

5. RESULTS OF RESEARCH

It is essential that all details and results of research are made known to all interested bodies. By the procedure described above dissemination of information on research is achieved through the members of the groups and committees of experts, members receiving, with minimum delay, all technical reports falling within the ambit of their particular group or committee. In this way necessary information is made available to mining industries in the member countries of the Community.

For wider dissemination, precise information on research being undertaken, results and patents are contained in abstracts published and distributed by the Commission. In addition any person or body requiring fuller information may obtain complete reports on any aided research upon request. Also,

during the lifetime of a programme, a report detailing projects, progress and other relevant information is published and distributed.

These methods have proved satisfactory and it is proposed that similar methods would be applied to a mine safety programme.

6. FINANCIAL ASPECTS AND DURATION OF PROGRAMME

A programme of safety research, as indeed with any research programme, should be of sufficient duration to enable tangible results to be achieved and as short as possible to enable the benefits arising from the studies to be implemented practically as quickly as possible.

Past experience has shown that in general a programme of five years duration is satisfactory and this period is proposed for the safety programme, to become operative in 1976. In general, projects included in the programme would be of two years duration.

With experience of financially aided research already having been done by the institutes which, for the most part, will do the research proposed under the safety programme, a reasonable estimate of the cost of financial aid from the Community can be obtained.

Financial aid by the Community can be a maximum of 75 % of the total costs of a research project, the beneficiary meeting the remainder. Over the years the cost of research, as with everything, has escalated and in arriving at a factual costing the possibility of a continuation of this trend over the next few years must be borne in mind. Many of the institutes already possess facilities essential for realistic research and to minimize cost it is imperative that the research work is correctly distributed so as to maximize the use of existing facilities and hence minimize programme spending.

In addition to the direct research costs sufficient credit should be made available to finance programme running costs. Such costs comprise those for the holding of all necessary meetings relative to the programme, travelling and subsistence allowances for experts and research workers, the organization and running of study or information seminars and the publishing and dissemination of the results of the research undertaken.

Considering all these aspects, to give a suitable programme which would contribute substantially towards increased safety in mines a total financial aid of 7 500 000 European units of account over a period of five years is considered necessary.

7. CONCLUSIONS

The Commission of the European Communities,

— considering the need to promote research in mine safety and adapt it to the methods of production and working evolved,

— taking account of the favourable opinions and full agreement of the professional, governmental and scientific consultative committees as well as the expressed views on research by the institutes and specialized bodies consulted,

— considering Article 55 of the European Coal and Steel Community Treaty,

Decides:

— to assign 7 500 000 European units of account for the realization, over a period of five years commencing in 1976, of a research programme 'safety in mines'.

COUNCIL DECISION

of 14 February 1977

adopting a technological research programme for the footwear industry

(77/188/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3) concerns the coordination of national policies and the definition of projects of interest to the Community;

Whereas, pursuant to Article 2 of the Treaty, the Community has *inter alia* as its task to promote throughout the Community a harmonious development of economic activities and a continuous and balanced expansion;

Whereas the technological improvements in footwear manufacture which are necessary on economic and social grounds and which constitute a step forward in the attainment of the said objectives, involve the implementation of certain research projects designed in particular to reduce manufacturing costs, to ensure a more rational use of raw materials and energy and greater flexibility of production to meet consumers' wishes and requirements, together with the establishment of better psychological and physical working conditions throughout the production cycle;

Whereas collective research plays an important role in the technical development of the footwear industry, since this sector consists mainly of small and medium-sized undertakings which cannot carry out their own research or whose own research is insufficient;

Whereas, since in the footwear industry the means to carry out research are too limited at national level, this industry and its research organizations have produced a collective research programme at Community level comprising three research projects and involving a total outlay of 1 355 000 units of account; whereas two of these projects, involving an outlay of 505 000 units of account, must be initiated immediately; whereas the footwear industry and its research organizations will not undertake the third project, involving an outlay of 850 000 units of account, until the results obtained from the first two projects are positive;

Whereas a Community research programme, intended to form part of the abovementioned collective programme and hence to facilitate its execution, constitutes a powerful force for integration in the footwear sector, which will furthermore promote the development of technology in the Community industry and an increase in its competitiveness;

Whereas the expenditure allocated by the footwear industry and its research organizations for the implementation of the first two projects in the collective programme exceeds the sum allocated for the Community programme; whereas the latter does not cover the third project;

Whereas the collective programme is the result of more than 10 years' cooperation between the research organizations and the footwear industry within the Community; whereas this fact should

(1) OJ No C 30, 7. 2. 1977, p. 26.
(2) Opinion delivered on 24 December 1976 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.

guarantee that the programme will be carried out rationally and lead to positive results;

Whereas the Community programme therefore appears necessary to attain, in the context of the common market, the objectives of the Treaty;

Whereas the Treaty did not make provision for the powers required for this purpose;

Having regard to the opinion of the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

A Community technological research programme for the footwear industry, as set out in the Annex hereto, is hereby adopted for a period of four years from 1 January 1977.

Article 2

The maximum financial contribution to be made by the Community towards the programme is set at 235 000 units of account, the unit of account being defined in Article 10 of the Financial Regulation of 25 April 1973 applicable to the general budget of the European Communities [1].

Article 3

The Commission shall implement the programme by means of contracts.

Article 4

The information gained as a result of the implementation of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [2].

Done at Brussels, 14 February 1977.

For the Council

The President

J. SILKEN

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[1] OJ No L 116, 1. 5. 1973, p. 1.
[2] OJ No L 255, 29. 9. 1974, p. 1.

ANNEX

COMMUNITY TECHNOLOGICAL RESEARCH PROGRAMME FOR THE FOOTWEAR INDUSTRY

An amount of 235 000 units of account is to be allocated for the implementation of the programme which centres on the following two projects:

Research Project I: Rational use of materials for uppers

Main objectives

Saving of raw materials; increased flexibility of production in accordance with consumer requirements; improvements of places of work; development of the technology for producing new machines and systems of adjustment.

Programme

Analysis of the degree of raw materials utilization achieved with current techniques, using information provided by a representative sample of 30 firms on the degree of materials utilization obtained during recent years using certain techniques and materials and for certain shapes and types of footwear. In addition a study of methods on the basis of one or more standard footwear designs.

Taking the results of the analysis as a basis, the development of systems for optimizing materials utilization, by using electronic beam scanning and data processing.

Research Project II: Rationalization of the manufacture of uppers

Main objectives

Adaptation of the technique for producing uppers to the rest of the shoe manufacturing process, in order to increase productivity, reduce production costs and improve working conditions.

Development of the necessary technology for constructing new, numerically-controlled machine tools.

Programme

Study of the production processes used in manufacturing three types of shoe, for men, women and children, requiring different production methods, on the basis of the experience of 120 undertakings. This study will cover the principal economic and ergonomic production parameters, e.g. materials, tooling and length of each operation, and will include an analysis of each of the 18 stages of production with a view to merging them into more satisfactory groups of integrated activities.

Collection and processing of the data necessary for numerical control and of the design data for new machine tools, in preparation for their processing by computer.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 18 July 1977

adopting a research programme to be implemented by the Joint Research Centre for the European Atomic Energy Community and for the European Economic Community (1977 to 1980)

(77/488/EEC, Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission presented after consultation, with regard to nuclear projects, of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas in the context of the common policy relating to the field of science and technology the multiannual research programme is one of the principal means whereby the European Atomic Energy Community can contribute to rapid and safe growth of nuclear industries and to the acquisition and the dissemination of information in the nuclear field;

Whereas in future the Joint Research Centre, in particular the establishment at Ispra, will be called upon to play a role in the Community programme for thermonuclear fusion, in particular in the field of fusion technology;

Whereas Article 2 of the Treaty establishing the European Economic Community assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an increase in stability; whereas the objectives pursued by the Community's activities to this end are set out in Article 3 of the said Treaty;

Whereas the non-nuclear projects provided for by this Decision appear necessary for the attainment of these objectives;

Whereas the Treaty establishing the European Economic Community has not provided powers required for this purpose;

Whereas the programme was drawn up in accordance with the Council resolution of 17 December 1970 concerning the procedures for adopting research and training programmes (3);

Whereas the Italian Government has undertaken to take over the ESSOR complex made available to it by the Commission, within the meaning of Article 6 (c) of the Treaty establishing the European Atomic Energy Community,

(1) OJ No C 238, 11. 10. 1976, p. 12.
(2) OJ No C 278, 24. 11. 1976, p. 12.

(3) OJ No L 16, 20. 1. 1971, p. 13.

HAS DECIDED AS FOLLOWS:

Article 1

A research programme, as presented in Annexes A, B and C, is hereby adopted for a period of four years, as from 1 January 1977.

Article 2

The total of commitments for expenditure necessary to implement the programme defined in Annex A is established at 346 million units of account. The maximum number of staff shall be progressively reduced from 2 118 to 2 038 members. The indicative breakdown of funds and staff is given in Annex B. The scale of financial contributions from the Member States for the supplementary research and training programme of the European Atomic Energy Community is determined in Annex C.

The unit of account shall be that defined in the Financial Regulation applicable to the general budget of the European Communites.

Article 3

The programme shall be reviewed during its third year. Such review may lead to a Council Decision on a new four-year programme in accordance with the appropriate procedure.

Article 4

The dissemination of the information resulting from the implementation of the non-nuclear parts of the programme shall be carried out in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974, adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [1].

Article 5

The Commission shall be responsible for the implementation of the programme and, to this end, shall call upon the services of the Joint Research Centre.

Done at Brussels, 18 July 1977.

For the Council

The President

A. HUMBLET

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX A

RESEARCH PROGRAMME (1977 to 1980)

I. NUCLEAR SAFETY
(joint programme)

1. **Reactor safety**
(nuclear)

The programme comprises six projects covering the following research:

— reliability and risk assessment,

— out-of-pile and in-pile studies of accidents involving loss of coolant in light water reactors,

— liquid metal fast breeder sub-assembly thermohydraulics,

— core melt-down and fuel-coolant interactions,

— dynamic structure loading and response,

— prevention of structural failure in reactors.

2. **Plutonium fuels and actinide research**
(nuclear)

The programme comprises three projects covering the following research:

— utilization limits of plutonium fuels,

— plutonium and actinides aspects of the safety of the nuclear fuel cycle,

— actinide research.

3. **Management of nuclear materials and radioactive waste**
(nuclear)

The programme comprises three projects covering the following research:

— assessment of the long-term hazards of radioactive waste storage,

— chemical separation and nuclear transmutation of actinides,

— studies on reactor component decontamination.

II. FUTURE FORMS OF ENERGY
(joint programme)

1. **Solar energy**
(non-nuclear)

The programme comprises three projects covering the following research:

— habitat and thermal conversion,

— European solar irradiation facility,

— orientation studies centred around direct conversion.

2. **Hydrogen**
(nuclear)

The programme comprises two projects covering the following research:

— thermo-chemical processes for the decomposition of water,

— heat source coupling.

3. **Thermonuclear fusion technology**
(nuclear)

The programme comprises the following activities:

— conceptual studies on thermonuclear fusion reactors,

— research on materials necessary for fusion, in particular on their behaviour under irradiation, and analysis of required testing methods and equipment,

— study of the problems concerning safety of the environment.

4. **High-temperature materials**
(nuclear)

The programme comprises four projects covering the following fields:

— meeting point Petten,

— the effect of the operational environment on the mechanical properties of high-temperature materials,

— failure modes of high-temperature materials,

— the relationship between structure, impurities and properties of high-temperature materials.

III. ENVIRONMENT AND RESOURCES
(Joint programme) (non-nuclear)

The programme comprises four projects covering the following fields:

— atmosphere,

— water,

— chemical products,

— renewable resources.

IV. MEASUREMENTS, STANDARDS AND REFERENCE TECHNIQUES (METRE)
(Joint programme)

The programme comprises five projects covering the following fields:

— measurements of nuclear data (nuclear project),

— nuclear reference materials and techniques (nuclear project),

— non-nuclear reference materials and techniques (non-nuclear project),

— scientific support for the Commission (non-nuclear project),

— scientific support for the Secretariat of the Community Bureau of References (CBR) (non-nuclear project).

V. SERVICE AND SUPPORT ACTIVITIES
(nuclear)

The programme comprises five projects covering the following activities:

(a) Joint programme

— informatics,

— training and education,

— fissile material control,

— technical evaluations in support of the Commission.

(b) Supplementary programme

— operation and utilization of the HFR reactor for programmes of the participating States. The free capacity can be placed at the disposal of the JRC without charge or of third parties in return for a fee.

ANNEX B

INDICATIVE BREAKDOWN OF FUNDS AND STAFF

	Commitments for expenditure (in million units of account)	Staff on 1 January 1977 (1)		Staff on 31 December 1980 (1)	
		Total	of which research staff	Total	of which research staff
1. *Nuclear safety*					
reactor safety	77·20	564	229	531	207
plutonium fuels and actinide research	39·29	219	121	212	117
management of nuclear materials and radioactive waste	21·06	138	64	133	62
Total	137·55	921	414	876	386
2. *Future forms of energy*					
solar energy	14·53	74	35	70	33
hydrogen	15·33	102	50	100	50
thermonuclear fusion technology	11·99	62	30	62	30
high temperature materials	8·20	52	36	50	35
Total	50·05	290	151	282	148
3. *Environment and resources*	35·18	232	109	227	109
4. *Measurements, standards and reference techniques (Métré)*	53·37	340	175	328	170
5. *Service and support activities*	33·26	241	107	234	105
Total	309·41	2 024	956	1 947	918
Operation and utilization of the HFR reactor (2)	36·59	94	42	91	41
GRAND TOTAL	346·00	2 118	998	2 038	959

(1) Not including the staff members placed at the disposal of the ESSOR complex in accordance with Article 6 (c) of the EAEC Treaty. These staff members total 222 on 1 January 1977.
(2) Supplementary programme.

ANNEX C

SCALE OF FINANCIAL CONTRIBUTIONS FROM THE MEMBER STATES FOR THE SUPPLEMENTARY RESEARCH AND TRAINING PROGRAMME OF THE EAEC

Flat-rate scale

Operation and utilization of the HFR reactor:

— Federal Republic of Germany:	50%
— Netherlands:	50%

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 18 July 1977

on advisory committees on research programme management

THE COUNCIL OF THE EUROPEAN COMMUNITIES, HEREBY ADOPTS THIS RESOLUTION:

1. Advisory Committees on Programme Management shall be set up or, where appropriate, retained in the following areas:

A. *DIRECT ACTION* [1]:

— reactor safety,

— plutonium fuels and actinide research,

— measurements, standards and reference techniques (METRE) — nuclear,

— operation and utilization of the HFR reactor,

— high-temperature materials,

— informatics,

— fissile material control.

B. *INDIRECT ACTION* [1]:

— plutonium recycling in light-water reactors,

— energy conservation,

— geothermal energy,

— systems analysis: development of models,

— biology: health protection (radiation protection).

C. *DIRECT* [2] *AND INDIRECT* [1] *ACTION:*

— solar energy,

— production and utilization of hydrogen,

— environment and resources,

— reference materials and methods,

— management and storage of radioactive waste,

— fusion and plasma physics.

The non-nuclear part of the (direct action) programme 'Measurements, standards and reference techniques (METRE)' has been entrusted to the Advisory Committee on Programme Management for Reference Materials and Methods (indirect action).

The programme for the management of nuclear materials and radioactive waste (direct action) has been entrusted to the Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste (indirect action).

[1] Programme adopted by Decision 77/488/EEC, Euratom (OJ No L 200, 8. 8. 1977).

[2] Programmes adopted by Decisions:
— 74/642/Euratom (OJ No L 349, 28. 12. 1974, p. 61),
— 75/406/Euratom (OJ No L 178, 9. 7. 1975, p. 28),
— 75/510/EEC (OJ No L 231, 2. 9. 1975, p. 1),
— 76/309/Euratom (OJ No L 74, 20. 3. 1976, p. 32),
— 76/310/EEC (OJ No L 74, 20. 3. 1976, p. 34),
— 76/311/EEC (OJ No L 74, 20. 3. 1976, p. 36),
— 76/345/Euratom (OJ No L 90, 3. 4. 1976, p. 12),
— 77/54/EEC (OJ No L 10, 13. 1. 1977, p. 28).

The programme on thermonuclear fusion technology (direct action) has been entrusted to the Liaison Group for indirect action on fusion and plasma physics. The Joint Research Centre is a member of this group which, while continuing to carry out the tasks entrusted to it by other means, is subject to the provisions of this resolution.

The part of the programme on environment and resources (direct action) concerning renewable resources has been entrusted to the Standing Committee on Agricultural Research (SCAR) [1].

2. Without prejudice to the Commission's responsibility in the implementation of these programmes, it shall be the task of each committee to contribute, in its advisory capacity, to the best possible implementation of the programme for which it is responsible (in particular the detailed definition of projects) and to assess the results and ensure better liaison [2] between the implementation of the programmes at Community level and the corresponding research and development work being carried out in the Member States.

3. The direct action committees may be consulted by the General Advisory Committee (GAC), established by Commission Decision 71/57/ Euratom [3], on draft proposals for reviewing programmes in progress and on draft proposals for future research programmes.

4. The indirect action committees shall be consulted on draft proposals for reviewing programmes in progress and on draft proposals for future research programmes as well as on the choice of 'project leaders' and the selection of the laboratories to which the work is to be entrusted.

5. Committees in fields where direct action and indirect action co-exist shall ensure that both actions form a coherent whole.

6. Each committee shall deliver opinions prepared by the secretariat and submitted for the committee's approval. Any member of a committee may request that his views be recorded in these opinions. Opinions shall be forwarded to the Commission, a copy being sent to the Council.

7. Each committee shall consist of not more than:

   (a) three officials appointed by the Commission (Commission delegation);

   (b) three experts appointed, by applying whatever criteria it deems appropriate, by each of the governments of the Member States taking part in the programme under consideration (Member States' delegations); the absence of any government's experts shall not deprive a committee meeting of its validity.

   In exceptional circumstances derogations may be made from these provisions following agreement among the delegations.

8. Each committee shall appoint its chairman for a period of one year on a proposal from the Commission delegation.

9. Secretariat services for the committees shall be provided by Commission officials placed for this purpose at the disposal of the committee under the authority of the chairman of each committee.

10. Each committee shall meet in principle three times a year.

11. This resolution cancels and replaces the Council resolutions of 30 June 1969, 22 July 1972, 19 November 1973, 10 December 1973, 17 December 1974, 26 June 1975 and 22 August 1975 respectively establishing Advisory Committees on Programme Management.

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[1] OJ No L 200, 8. 8. 1977.

[2] The concept of 'liaison' refers solely to implementation of Community programmes and not to the co-ordination of national programmes.

[3] OJ No L 16, 20. 1. 1971, p. 14.

No L 255/22 Official Journal of the European Communities 6. 10. 77

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 27 September 1977

adopting a series of informatics projects in the field of software portability

(77/615/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament [1],

Having regard to the opinion of the Economic and Social Committee [2],

Whereas, with a view to giving a Community orientation to policies for encouraging and promoting data processing, the Council agreed in its resolution of 15 July 1974 on a Community policy on data processing [3] to adopt, on a proposal from the Commission, industrial development projects on areas of common interest involving transnational cooperation;

Whereas the portability of software will enable users substantially to reduce conversion costs when changing over from one type of equipment to another; whereas to this end it is necessary to promote a series of projects aimed at the industrial development of languages, systems and portable products in the field of software;

Whereas the abovementioned projects seem necessary in order to attain certain Community objectives within the functioning of the common market;

Whereas the Treaty establishing the European Economic Community has not provided the necessary powers,

HAS DECIDED AS FOLLOWS:

Article 1

The following three joint informatics projects are hereby adopted:

(a) study of a software writing language;
(b) study on conversion tools;
(c) study on the feasibility of developing a common software interface for minicomputers.

These projects are defined in section II of the Annex.

Article 2

The duration of the studies referred to in Article 1 shall be one year. The appropriations necessary for carrying them out, which shall amount to 390 000 units of account, shall be entered in the budget of the European Communities.

Article 3

The Commission shall be responsible for carrying out the projects. It shall be assisted by the Advisory Committee on Joint Data-Processing Projects.

The Commission shall submit a report to the Council at the end of the studies.

Done at Brussels, 27 September 1977.

For the Council

The President

A. HUMBLET

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(1) OJ No C 28, 9. 2. 1976, p. 6.
(2) OJ No C 131, 12. 6. 1976, p. 8.
(3) OJ No C 86, 20. 7. 1974, p. 1.

ANNEX

PROJECTS IN THE FIELD OF SOFTWARE PORTABILITY

I. INTRODUCTION

The fact that the computer market is shared by different manufacturers gives rise to numerous difficulties for the user who wishes to transfer his applications to new, more powerful hardware, or to use several incompatible items of equipment simultaneously.

Accordingly, when applications are transferred to new hardware, or when they are processed simultaneously by different items of equipment, the degree of difficulty encountered by the user will depend on what, for the sake of convenience, will be called their 'portability'.

It should be noted that similar problems arise in regard to intercommunication between different makes of hardware.

At present there is little or no portability of application; changing manufacturers becomes a major problem which many prefer to avoid.

A preliminary estimate of the minimum program conversion costs which are likely to be incurred over the next five years without action by the Community is in the region of 1 000 million units of account.

The purpose of these projects is to promote software portability, so as to cope with this technically and economically disadvantageous situation.

The projects, which derive from detailed study and consultations, are as follows:

(a) study of a software writing language;

(b) study on conversion tools;

(c) study on the feasibility of developing a common software interface for minicomputers.

As regards the study under (c), a large number of manufacturers of peri-informatic equipment have shown particular interest in the possibility of developing an advanced level software interface which could make software portable or compatible on different types of equipment.

The following two main advantages are expected from this approach:

— longer life for software products,

— possibility of wider integration of products which might originally have been incompatible.

Users also stand to derive significant advantages, such as:

— greater freedom of choice, and thus a wider possibility of matching requirements,

— greater flexibility in the organization of data exchange or of task assignment procedures in a distributed intelligence environment.

Since software development costs are continuously and dramatically increasing, the general economic benefit of a standard approach will not be negligible.

On the other hand, such an approach to a software interface by the European peri-informatics industry could have certain disadvantages, particularly for certain large companies with a strong market position selling 'solutions to problems'. Such companies see the specific nature of their products as a protection of their market. Moreover, if the market is sufficiently large and the existing range of products offered wide, an *ad hoc* solution may well prove more economical and efficient.

It is therefore necessary to carry out a study with a view to analyzing the advantages and disadvantages of such an approach and examining its feasibility. The study will initially be centred on applications in the fields of telecommunications and data transmission.

Minicomputers will be increasingly used in telecommunications. It is equipment in this sector which the manufacturers of peri-formatic equipment consulted by the Commission generally feel will benefit from such an approach (as compared, for example, with office calculators).

Data transmission is one of the most promising and faster-growing sectors of the electronics market. Since it plays an important part in a wide range of applications from process control to scientific and business-oriented data collection systems, most manufacturers of peri-informatic equipment are going to be involved in it.

If the portable products resulting from the projects are a commercial success, the funds given to industry for their realization will be reimbursed to the Community according to a formula to be defined within the general context of the administration of projects and of the medium-term programme.

II. DESCRIPTION OF THE PROJECTS

1. Study of a software writing language

This language and the compilers required for use on various types of equipment are a prerequisite for the realization of all the portable products forming the subject of these projects.

The development of this language must therefore be regarded as a matter of utmost priority.

The study is designed to identify the necessary characteristics of the future ESL (European System Language), and also involves tests on existing languages, with a view to determining whether one of these may be speedily adopted for wider use and further development. The choice of language will be made on the basis of very strict criteria which, apart from those resulting from the study, will consist at least of the following:

— compilers of the chosen language must exist on different types of equipment,
— the compilers must be able efficiently to generate object programs of the 'system' type,
— the cost of developing new versions of compilers for other types of equipment must be low,
— portable products that have given proof of their efficiency and portability must exist in the chosen language.

This study and the selection procedure will take approximately nine months.

The anticipated results are as follows:

(a) definition of the future characteristics of ESL;
(b) if an existing language is capable of meeting future development requirements, identification of the characteristics requiring modification or further development.

The subsequent phases of the project, scheduled for 1978, will hinge on the results of the study phase and will require a decision in the context of the multiannual programme.

2. Study on conversion tools

In the medium and long term the portable products whose development forms the objective of these proposals will reduce incompatibilities between different types of equipment and make for portability of new applications. However, there is a large body of existing computer applications which the user must nowadays convert whenever he changes over to another type of equipment.

This means that the project for the development of conversion tools is designed to meet a need which is now felt by any user wishing to change over to a different computer, and therefore has a high degree of urgency.

If conversion is to be carried out in the way most advantageous to the user both technically and financially, a certain number of tools such as COBOL and FORTRAN translators, translators for assembler languages, translators for control languages, file converters, etc. must be available.

The first phase will consist of an investigation of requirements and a review of the tools already available or under development at national or company level; it will be followed by the preparation of specifications for the conversion tools and facilities for which Community development support will be desirable. These tools and facilities should be as widely applicable as possible.

The second phase will be concerned with the development of the tools considered necessary, and will require a decision in the context of the multiannual programme.

3. Study on the feasibility of developing a common software interface for minicomputers

The proposed study aims to analyze the feasibility conditions of a common nucleus for an operating system of minicomputers i.e. an advanced common software interface.

This choice is justified by the fact that a growing number of the basic functions of primitive software are performed by hardware, and this trend may well become more widespread in the near future given the rapid progress of technology.

Particular attention will be paid to the compatibility and/or portability level of software in a distributed intelligence environment. The study will thus be mainly orientated toward data-transmission applications; nevertheless, possibilities of extension to other applications will be borne in mind and the relevant conditions indicated.

The study will cover the following points:

(a) analysis of the latest concepts applied to the architecture of systems using minicomputers and micro-processors and estimates of their trends over the forecast lifespan of the software product;
(b) evaluation of the basic performances and requirements of an operating system, with particular emphasis on the more specific elements required by its implementation in a distributed intelligence environment;
(c) examination of the optimum implementation level of the software interface, taking into account the results of phases (a) and (b) as well as interaction with standard data-exchange protocols, interface with public networks and multilayer (upward-downward) compatibility;
(d) examination of interaction between hardware, software and network characteristics and consideration of a common programming language and certain subsystems;
(e) detailed identification of the economic risks and advantages of a common software interface and of the market conditions and sectors in which this would be beneficial. The identification will include estimates of cost and time requirements and state the specific hypotheses on which these are based.

COUNCIL DECISION

of 27 September 1977

adopting a series of studies in support of the use of informatics

(77/616/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council resolution of 15 July 1974 on a Community policy on data processing (3) is aimed at giving a Community orientation to policies for encouraging and promoting data processing;

Whereas the development of application software raises a number of general problems concerning programming techniques and relations between manufacturers and users;

Whereas the development of informatics applications calls for an examination of the problems of data security and confidentiality and of the technical, legal and social aspects thereof, in particular with a view to protecting citizens in respect of the use of informatic facilities;

Whereas the efficient use of computers is of considerable economic importance; whereas, to increase this efficiency, programming techniques must be improved;

Whereas data-base systems and software should be systematically examined and tools developed to help users to select, implement and operate these systems and to facilitate standardization at a later stage;

Whereas the above projects seem necessary in order to attain certain Community objectives within the functioning of the common market;

Whereas the Treaty establishing the European Economic Community has not provided the necessary powers,

HAS DECIDED AS FOLLOWS:

Article 1

The following three joint informatics studies are hereby adopted:

(a) study on data security and confidentiality;

(b) study on programming techniques;

(c) study on the evaluation and implementation of informatic systems.

These studies are defined in section II of the Annex.

Article 2

The duration of the studies referred to in Article 1 shall be three years. The appropriations necessary for carrying them out, which represent 50 % of their cost, shall be entered in the budget of the European Communities. They shall amount to 1 245 000 units of account. 50 % of the cost of implementing the studies shall be borne by the institutes concerned.

Article 3

The Commission shall be responsible for carrying out the studies. It shall be assisted by the Advisory Committee on Joint Data Processing Projects.

The Commission shall submit a report to the Council annually.

Done at Brussels, 27 September 1977.

For the Council

The President

A. HUMBLET

(1) OJ No C 28, 9. 2. 1976, p. 6.
(2) OJ No C 131, 12. 6. 1976, p. 8.
(3) OJ No C 86, 20. 7. 1974, p. 1.

ANNEX

I. INTRODUCTION

Some attempts to overcome the problems posed by the development of application software have been made by hardware or software producers or users, depending on their capabilities or the advantages to themselves, but not in any coherent fashion.

Consequently, in order to cope with a situation characterized by confusion which at present shows no sign of improvement, some Community effort, especially of a methodological nature, would be helpful if in the medium or long term more suitable approaches to the use, security or design of informatic systems which would benefit users and industry were defined, so that products better suited to actual needs can be produced with more appropriate tools.

The studies should be carried out as far as possible by competent centres independent of the user or producer sectors concerned.

II. DESCRIPTION OF STUDIES

1. Study on data security and confidentiality

The main object of this study is to examine, in conjunction with the Committee of National Experts convened by the Commission, the chief problems relating to the harmonization of Community legislation covering the protection of private life and the development of codes of application and corresponding standards.

The work will include analysis and classification of the problems and, in particular:

— estimates of the quantitative and qualitative aspects of the movement of data across frontiers inside and outside the Community,

— possible role of Community standards with a view to easier control of such movement, reduction of costs and opening of markets as a complement to effects of legislation — identification of priorities for the adoption of Community standards,

— preparatory studies with regard to cost estimates. Costs and possible distortion of competition which could ensue from different national legislations; costs resulting from Community harmonization; impact of costs borne by the public and private sectors and by individuals,

— identification of appropriate measures offering equivalent security at Community level,

— analysis of studies undertaken at national level in the Member States and other countries such as Sweden and the United States,

— analysis of problems relating to data security which could have an effect on confidentiality, legislation and standards, and a definition of the studies which should be carried out.

The continuation of work resulting from this analysis will be decided upon in the context of the multiannual programme.

2. Study on programming techniques

The initial study on programming techniques has the following main aims:

— to identify fields of special importance to users,

— to draft proposals for the fields in which the greatest needs are felt,

— to define specifications for a possible future detailed study.

3. **Study on evaluation and implementation of data-base systems**

The study will take two years and will comprise the following activities :

— examination of users' needs, of problems and of experience,

— development, on the basis of this examination and of the analysis of guidelines for the selection, implementation and use of data-base systems,

— formulation of recommendations regarding standardization and portability of data-base systems.

A decision concerning further work on experiments and on the application of results will be taken in the context of the multiannual programme.

COUNCIL DECISION

of 27 September 1977

adopting an experimental application project in high-speed data-transmission techniques

(77/617/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, with a view to giving a Community orientation to policies for encouraging and promoting data-processing, the Council agreed in its resolution of 15 July 1974 on a Community policy on data processing (3) to adopt, on a proposal from the Commission, joint projects of European interest in the field of data-processing applications;

Whereas, to this end, priority should be given to projects likely to meet users' needs and increase the capacity of the Europe-based informatics industry so as to satisfy these needs on the European and world markets;

Whereas the evolution of ground networks and satellite links for data transmission requires the development of advanced techniques and procedures to provide the reliability necessary for transmitting large quantities of data at high speeds;

Whereas such a project seems necessary in order to attain certain Community objectives within the functioning of the common market;

Whereas the Treaty establishing the European Economic Community has not provided the necessary powers,

HAS DECIDED AS FOLLOWS:

Article 1

A joint informatics project on the experimental application of high-speed data-transmission techniques is hereby adopted.

This project is defined in section II of the Annex.

Article 2

The duration of the project shall be four years. The necessary appropriations for carrying it out, which shall amount to 420 000 units of account, shall be entered in the budget of the European Communities.

Article 3

The Commission shall be responsible for carrying out the project. It shall be assisted by the Advisory Committee on Joint Data Processing Projects.

The Commission shall submit a report to the Council annually.

Done at Brussels, 27 September 1977.

For the Council

The President

A. HUMBLET

(1) OJ No C 28, 9. 2. 1976, p. 6.
(2) OJ No C 131, 12. 6. 1976, p. 8.
(3) OJ No C 86, 20. 7. 1974, p. 1.

ANNEX

EXPERIMENTAL APPLICATION OF HIGH-SPEED DATA-TRANSMISSION TECHNIQUES

I. INTRODUCTION

The project covers the experimental development of a computer application and comprises a series of experiments in computer-to-computer communication by users using the orbital test satellite (OTS) designed by the European Space Agency (ESA). The project provides for experiments with advanced high-speed data-transmission techniques using facilities designed by the various participants in the project: ESA, European Organization for Nuclear Research (CERN) and their associate laboratories.

New data-communication techniques are already having an impact on almost all aspects of human affairs. The experiments carried out on the ESA Orbital Test Satellite (OTS) in the area of informatics for high-energy physics research will greatly benefit the organizations involved, and should provide valuable information.

1. Background and OTS requirements

The Orbital Test Satellite (OTS) is an experimental communications satellite built by the European Space Agency (ESA). The satellite operates on two narrow band channels for use in high-speed data-transmission experiments. The purpose of the OTS is to pave the way for the planned European Communications Satellite and to try out the new ideas and techniques which the latter will use.

The development of the high communication capacity satellite is already being funded by ESA. Users and potential users of computer-to-computer applications requiring high-speed data-transmission facilities are invited to examine the possibilities of the OTS. Practical experiments should be conducted in bulk data-transfer with particular reference to error-checking and error procedures. Such experiments would be valuable as a source of early operational data based on real usage of a satellite link which could be used in the planning and design of standard equipment by industry. Simple, low-cost, ground stations handling data rates not in routine use today will require the development of appropriate antennae, radio frequency amplifiers and receivers, data-transmission equipment and formats.

2. Background and CERN requirements

Hundreds of scientists of the Member States come to CERN to carry out high-energy experiments. Experimental data on bubble chambers is collected every year at CERN on film and on tens of thousands of magnetic tapes and the great majority is eventually analyzed on computers in the researchers' home laboratories. At present the means of transport of the data (by aircraft or by road) is inadequate. This constraint makes it impossible to use computers in the scientists' home laboratories in order to monitor the progress of their experiments at CERN, analyze significant data samples and return the results in time to correct errors or malfunctions. These sample calculations have, therefore, to be done at CERN. The physicists have to develop and maintain two sets of programs, possibly for different makes of computers, with all the extra work and possibilities of error which this entails.

An advanced economical system of data transmission between the various laboratories allowing remote use of computers would increase the efficiency of CERN's operations, and make for a better balance of work between universities and CERN.

CERN is thus very interested in current developments in international data networks and is ready to participate in their development in any way consistent with its task and resources. Several other high-energy physics laboratories have manifested a similar interest and desire to join in experiments on international data transmission.

CERN and its collaborating laboratories are particularly well placed to help in tests involving realistic heavy traffic, since the high-energy physicists form a community accustomed to exploiting large quantities of data but work with equipment and services which do not have public-service reliability and availability.

It is therefore proposed that CERN and interested associated laboratories would be provided with the necessary equipment to establish a satellite link. This would require the installation of a transmitting/receiving ground station at CERN and of appropriate ground stations at the various laboratories. Several associated laboratories of CERN have shown interest in these experiments, notably the 'Rutherford High Energy Laboratory' (RHEL) in the United Kingdom, the 'Deutsches Elektronen-Synchrotron' (DESY) in Germany and the centre of Saclay in France, whose preparations have already reached an advanced stage. Other possibilities are centres in Amsterdam and Bologna.

II. DESCRIPTION AND TIMETABLE OF THE PROJECT

1. Description

Installation of transmitting/receiving equipment at CERN, in order to provide a high-speed link from CERN to the associated laboratories and a low-speed link in the opposite direction.

The key elements include :

— the development and testing of the equipment necessary to establish a computer-to-computer link via the OTS system at high data-transmission rates,

— the experimental use of the OTS satellite for bulk transmission of data with particular emphasis on the development of error-checking techniques and error-control procedures. The implementation of the project will be carried out in close cooperation with the P & T administrations concerned.

It is also intended to use the expertise existing within the COST 11 project 'European Informatics Network' (EIN), in order to ensure that the technical options chosen are geared to the future requirements of computer-to-computer communications and to the development of data-transmission techniques in general.

The financial contribution referred to in Article 2 of the Decision will cover only the cost of the joint equipment located at CERN and of the interfaces between transmitting/receiving stations and the informatic equipment of RHEL, DESY and Saclay (the transmitting/receiving stations of these centres being financed at national level).

2. Timetable

Tests by CERN and its partners could commence, on a part-time basis, during the six months following the launching of the OTS satellite. The main data-transmission experiments will begin only later. The project is scheduled to last four years.

COUNCIL DECISION

of 27 September 1977

adopting a number of exploratory studies in the field of informatics

(77/618/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, with a view to giving a Community orientation to policies for encouraging and promoting data processing, the Council agreed in its resolution of 15 July 1974 on a Community policy on data processing (3) to adopt, on a proposal from the Commission, joint projects of European interest in the field of data-processing applications;

Whereas the development of further projects of Community interest and of a medium-term programme in informatics requires systematic exploratory studies;

Whereas the studies referred to above seem necessary in order to attain certain objectives of the Community within the functioning of the common market;

Whereas the Treaty establishing the European Economic Community has not provided the necessary powers,

HAS DECIDED AS FOLLOWS:

Article 1

A series of exploratory studies is hereby adopted; their purpose shall be to complete the definition of projects provided for in the framework of a medium-term programme.

Article 2

The duration of the studies shall be one year. The appropriations necessary for carrying them out, which shall amount to 200 000 units of account, shall be entered in the budget of the European Communities.

Article 3

The Commission shall be responsible for carrying out the studies. It shall be assisted by the Advisory Committee on Joint Data Processing Projects.

The Commission shall submit a report to the Council at the end of the studies.

Done at Brussels, 27 September 1977.

For the Council

The President

A. HUMBLET

(1) OJ No C 28, 9. 2. 1976, p. 6.
(2) OJ No C 131, 12. 6. 1976, p. 8.
(3) OJ No C 86, 20. 7. 1974, p. 1.

COUNCIL DECISION

of 27 September 1977

adopting a European Economic Community concerted project in the field of treatment and use of sewage sludge

(77/651/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 therof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas by virtue of Article 2 of the Treaty the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in the declaration of 22 November 1973 (3) the Council approved the principles and objectives of a Community environmental policy and the general description of the actions to be undertaken at Community leve ; whereas in the Resolution of 17 May 1977 (4) the Council approved the continuation and implementation of a Community policy and action programme on the environment;

Whereas in its Decision 76/311/EEC (5) the Council adopted an environmental research programme;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (6), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted projects, and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, on 4 May 1976, the Council adopted a Directive 76/464/EEC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community (7);

Whereas, in its Resolution of 14 January 1974 on in particular the coordination of national policies in the field of science and technology (8), the Council entrusted the Community Institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a research project on certain aspects of the problem of sewage sludge, carried out under an Agreement signed on 23 November 1971 in the framework of European Cooperation in the field of Scientific and Technical Research (COST) (COST Project 68), produced very encouraging results;

Whereas a concerted Community research project in the field of treatment and use of sewage sludge, continuing and extending COST Project 68, must contribute effectively to the achievement of the abovementioned aims, in particular with regard to the reduction of environmental pollution and the more economical use of natural resources;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of three years;

Whereas the execution of such research as described in Annex I will require a financial contribution of

(1) OJ No C 163, 11. 7. 1977, p. 70.
(2) OJ No C 126, 28. 5. 1977, p. 21.
(3) OJ No C 112, 20. 12. 1973, p. 1.
(4) OJ No C 139, 13. 6. 1977, p. 1.
(5) OJ No L 74, 20. 3. 1976, p. 36.
(6) OJ No C 7, 29. 1. 1974, p. 6.
(7) OJ No L 129, 18. 5. 1976, p. 23.
(8) OJ No C 7, 29. 1. 1974, p. 2.

about six million units of account from the Member States;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement over a period of three years a concerted project in the field of treatment and use of sewage sludge (hereinafter referred to as the 'project'), within the framework of its Environmental Research Programme.

The project shall consist in coordination at Community level of the research described in Annex I and forming part of the national research programmes of the Member States.

Article 2

The Commission shall be responsible for the coordination.

Article 3

The maximum financial contribution by the Community to such coordination will be 140 000 units of account, the unit of account being defined by the relevant financial regulations.

Article 4

To facilitate the execution of the project, a concerted action Committee on the treatment and use of sewage sludge, hereinafter referred to as 'the Committee', shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. The Committee shall, in particular, assist the Commission in its coordination.

The terms of reference and the composition of the Committee are defined in Annex II.

The Committee shall draw up its rules of procedure. Its secretariat will be provided by the Commission.

Article 5

(a) In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member States participating in the project shall exchange regularly all useful information concerning the execution of the research covered by the concerted project and shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. Any information shall be treated as confidential if so requested by the Member State which provides it.

(b) The Commission shall prepare yearly progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

(c) At the end of the coordination period, the Commission, in agreement with the Committee, shall forward to the Member States and the European Parliament a general report on the execution and results of the coordination action. The Commission shall publish this report six months after it has been forwarded to the Member States, unless a Member State objects. In this case the report shall be distributed, at their request, solely to the Institutions and undertakings whose research or production activities justify access to the knowledge resulting from the performance of the research covered by the project. The Commission may make arrangements to ensure that the report remains confidential and is not passed on to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States involved in European Cooperation in the field of Scientific and Technical Research (COST) with a view to extending the coordination which is the subject of this Decision to research undertaken in those States.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Article 7

This Decision shall be published in the *Official Journal of the European Communities*. It shall take effect on the day of its publication.

Done at Brussels, 27 September 1977.

For the Council

The President

A. HUMBLET

ANNEX I

RESEARCH PROGRAMME IN THE FIELD OF TREATMENT AND USE OF SEWAGE SLUDGE

(concerted project)

The main purpose of the work is to acquire scientific and technical knowledge required for the implementation of the Programme of Action of the European Communities on the environment. The research covers the following topics:

Research topics	Division of research work among Member States							
	B Lux.	D	DK	F	I	IRL	NL	UK
1. Sludge stabilization and odour problems:								
— Definition and determination of 'degree of stability' and relation to odour nuisance			×	×				×
— Comparative evaluation of stabilization procedures		×	×		×			
2. Problems related to sludge dewatering:								
— Research on water binding forces							×	
— Development and standardization of methods for the assessment of dewatering properties	×	×		×	×			×
— Problems related to the use of flocculants		×		×				×
— Comparative evaluation of thickening and dewatering equipment					×		×	
3. Analytical problems related to sludge treatment and use:								
— Characterization of pathogens and evaluation of disinfection procedures	×	×	×					
— Characterization and determination of pollutants (heavy metals, persistent organic compounds) in sludge and development of standardized analytical methods	×			×				×
4. Environmental problems related to sludge use:								
— Special processing of sludge for agricultural use (e.g. composting) including the improvement of disinfection procedures and pollutant removal		×		×	×		×	
— Transfer of pollutants to plants and harmful effects on vegetation			×	×			×	×
— Effects of long range sludge application on soil quality and ground water	×	×		×		×		×
— Optimum land use of sludge, including sludge from dephosphatation plants		×		×			×	×

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED ACTION COMMITTEE ON THE TREATMENT AND USE OF SEWAGE SLUDGE

1. The Committee shall:

   1.1. contribute to the optimum execution of the programme by giving its opinion on all of its aspects;

   1.2. evaluate the results of the project and draw conclusions as to their application;

   1.3. be responsible for the exchange of information referred to in Article 5 (a);

   1.4. keep abreast of national research being done in the fields covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project;

   1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and the Member States participating in the project. The Commission shall forward these opinions to the CREST.

3. The Committee shall be composed of the persons responsible for coordinating the national contributions to the programme, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 7 February 1978

adopting a European Economic Community concerted research project on the growth of large urban concentrations

(78/150/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas by virtue of Article 2 of the Treaty the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas by its resolution of 17 May 1977 (3) the Council approved the principles and objectives of a Community environmental policy and the general description of the actions to be undertaken at Community level, and in particular the Commission's intention to submit a proposal for a Community research programme on the growth of large urban concentrations;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (4), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted action projects, and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, by its resolution of 14 January 1974 on in particular the coordination of national policies in the field of science and technology (5), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a concerted Community research project on the growth of large urban concentrations will contribute effectively to the achievement of the abovementioned aims;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of two years;

Whereas the execution of such research as described in Annex I will require a financial contribution of about 1 000 000 European units of account from the Member States;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Having regard to the opinion which CREST has given on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement over a period of two years a concerted research project on the growth of large urban concentrations (hereinafter referred to as 'the project').

The project shall consist in coordination at Community level of the research described in Annex I and forming part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for the coordination.

Article 3

The maximum financial contribution by the Community to such coordination will be 200 000 European units of account, the unit of account being defined by the relevant financial Regulations.

Article 4

To facilitate the execution of the project, a Concerted Research Project Committee on the growth of large urban concentrations (hereinafter referred to as 'the Committee') shall be established.

(1) OJ No C 299, 12. 12. 1977, p. 52.
(2) Opinion delivered on 14 and 15 December 1977 (not yet published in the Official Journal).
(3) OJ No C 139, 13. 6. 1977, p. 1.
(4) OJ No C 7, 29. 1. 1974, p. 6.
(5) OJ No C 7, 29. 1. 1974, p. 2.

A project leader shall be appointed by the Commission in agreement with the Committee. He shall, in particular, assist the Commission in its coordination.

The terms of reference and the composition of the Committee are defined in Annex II.

The Committee shall draw up its rules of procedure. Its secretariat will be provided by the Commission.

Article 5

1. In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member States participating in the project shall exchange regularly all useful information concerning the execution of the research covered by the project and shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on research (planned or carried out) in the field of the project by bodies for which they are not responsible. The information shall be treated as confidential if so requested by the Member State which provides it.

2. The Commission shall prepare yearly progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period, the Commission, in agreement with the Committee, shall forward to the Member States and the European Parliament a general report on the execution and results of the project. The Commission shall publish this report six months after it has been forwarded to the Member States, unless a Member State objects. In this case the report shall be distributed, at their request, solely to the institutions and undertakings whose research or production activities justify access to the knowledge resulting from the performance of the research covered by the project. The Commission may make arrangements to ensure that the report remains confidential and is not passed on to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States involved in European cooperation in the field of scientific and technical research (COST) with a view to extending the coordination which is the subject of this Decision to research undertaken in those States.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Article 7

This Decision shall be published in the *Official Journal of the European Communities*.

It shall take effect on the day of its publication.

Done at Brussels, 7 February 1978.

For the Council

The President

K. B. ANDERSEN

ANNEX I

Description and distribution of the research work

The aspects of the growth of large urban concentrations to be studied and the distribution of work among the Member States may be summarized as follows :

Subject	Member State							
	B	D	DK	F	IRL	I	NL	UK
1. Location of economic activities		X	X	XX	X	X	XXX	XX
2. Migration		X						XXX
3. Evaluation of urban planning and policies	X			XX	X			
4. Other aspects	X					X		XX

ANNEX II

Terms of reference and composition of the Concerted Research Project Committee on the Growth of Large Urban Concentrations

1. The Committee shall :

   1.1. contribute to the optimum execution of the programme by giving its opinion on all of its aspects ;

   1.2. evaluate the results of the project and draw conclusions as to their application ;

   1.3. be responsible for the exchange of information referred to in Article 5 (1) ;

   1.4. keep abreast of national research being done in the field covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and the Member States participating in the project. The Commission shall forward these opinions to Crest.

3. The Committee shall be composed of the persons responsible for coordinating the national contributions to the project, and the project leader. Each member may be accompanied by experts.

4. The members of the Committee shall be appointed for the duration of the project. A member's mandate ceases should the member die or resign, or if the government which appointed him asks that he be replaced. His successor shall be appointed for the remainder of the initial term of office.

COUNCIL DECISION

of 13 February 1978

adopting a concerted project of the European Economic Community in the field of registration of congenital abnormalities (medical and public health research)

(78/167/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, by virtue of Article 2 of the Treaty establishing the European Economic Community, the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standards of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted projects and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, in its resolution of 14 January 1974 relating in particular to the coordination of national policies in the field of science and technology (4), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a concerted Community research action in the field of registration of congenital abnormalities is likely to contribute effectively to the achievement of the abovementioned aims;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of three years;

Whereas the execution of such research as described in Annex I will require a financial contribution of about 850 000 units of account from the Member States;

Whereas the Community is empowered to conclude Agreements with third countries in the fields covered by this Decision; whereas it may prove advisable to extend the coordination established by this Decision to third countries participating in European cooperation in the field of scientific and technical research (COST); whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of these Agreements and, on the other, negotiations should be opened with the countries referred to as soon as this Decision is adopted;

Whereas the Treaty has not provided the specific powers for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement for a period of three years a concerted project in the field of Registration of Congenital Abnormalities, hereinafter referred to as 'the project'.

The project shall consist in coordination at Community level of the research described in Annex I, which forms part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

(1) OJ No C 299, 12. 12. 1977, p. 47.
(2) Opinion on 23 and 24 November 1977 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No C 7, 29. 1. 1974, p. 2.

Article 3

The maximum financial contribution by the Community to such a project will be 330 000 units of account, the unit of account being defined by the relevant Financial Regulations.

Article 4

To facilitate the execution of the project, a concerted action Committee on the Registration of Congenital Abnormalities, hereinafter referred to as 'the Committee' shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. He shall, in particular, assist the Commission in its coodinating action.

The terms of reference and the composition of this Committee are defined in Annex II.

The Committee shall draw up its rules of procedure. Its secretariat will be provided by the Commission.

Article 5

In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member State participating in the project shall exchange regularly all useful information concerning the execution of the research covered by the project and forward to the Commission all information that may be useful for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. This information shall be treated as confidenial if so requested by the Member State which provides it.

The Commission shall prepare yearly progress reports on the basis of the information supplied and shall forward them to the Member States and to the European Parliament.

At the end of the coordination period, the Commission shall, in agreement with the Committee, forward to the Member States and to the European Parliament a general report on the execution and results of the coordination action. The Commission shall publish this report six months after it has been forwarded to the Member States unless a Member State objects. In this case the report shall be distributed, at their request, solely to institutions and undertakings whose research and production activities justify access to the results of the research carried out under the project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

1. In accordance with the provisions laid down in Article 228 of the Treaty establishing the EEC, the Community may conclude Agreements with other States involved in European cooperation in the field of scientific and technical research (COST) with a view to extending the coordination which is the subject of this Decision to research undertaken in these States.

2. The Commission is hereby authorized to open negotiations for the conclusion of Agreements of the type referred to in the preceding paragraph.

Article 7

This Decision shall come into force on 1 January 1978.

Done at Brussels, 13 February 1978.

For the Council

The President

P. DALSAGER

ANNEX I

RESEARCH PROGRAMME RELATING TO THE REGISTRATION OF CONGENITAL ABNORMALITIES

(Concerted project)

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics :

1. Registration of congenital malformations as well as of inherited biochemical and chromosome abnormalities in selected regions of the Community. The registration will progressively extend to abnormalities of the nervous system (anencephaly, spina bifida, etc.), Down's syndrome, gross abnormalities of the limbs, multiple abnormalities, phenylketonuria and cœliac disease.
2. Registration of twins and multiple pregnancies in selected regions of the Community.
3. Relevant methodological studies in order to obtain an optimal coordination of both existing national registers and registration procedures.

The coordination will include the following regional registers of the Member States :

Belgium :	Brugge and Hainaut.
Denmark :	Odense.
France :	Paris.
Germany :	Hessen.
Ireland :	Dublin and Galway.
Italy :	Florence and Rome.
Luxembourg :	Luxembourg.
Netherlands :	Leidschendam.
United Kingdom :	Belfast, Glasgow and Liverpool.

These countries will contribute research under the three topics mentioned above.

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED ACTION COMMITTEE ON THE REGISTRATION OF CONGENITAL ABNORMALITIES

1. The Committee shall :

   1.1. contribute to the optimum execution of the programme by giving its opinion on all of its aspects ;

   1.2. evaluate the results and draw conclusions as regards their application ;

   1.3. be responsible for the exchange of information referred to in the first subparagraph of Article 5 ;

   1.4. keep abreast of national research being done in the fields covered by the concerted project, and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and to the Member States participating in the project. The Commission shall forward these opinions to the CREST.

3. The Committee shall be composed of persons responsible for coordinating the national contributions to the programme, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 13 February 1978

adopting a concerted project of the European Economic Community in the field of cellular ageing and decreased functional capacity of organs (medical and public health research)

(78/168/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal of the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, by virtue of Article 2 of the Treaty establishing the European Economic Community, the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standards of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted projects and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, in its Resolution of 14 January 1974 relating in particular to the coordination of national policies in the field of science and technology (4), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a concerted Community research action in the field of cellular ageing and decreased functional capacity of organs is likely to contribute effectively to the achievement of the abovementioned aims;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of four years;

Whereas the execution of such reseach as described in Annex I will require a financial contribution of about four million units of account from the Member States;

Whereas the Community is empowered to conclude Agreements with third countries in the fields covered by this Decision; whereas it may prove advisable to extend the coordination established by this Decision to third countries participating in European cooperation in the field of scientific and technical research (COST); whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of these Agreements and, on the other, negotiations should be opened with the countries referred to as soon as this Decision is adopted;

Whereas the Treaty has not provided the specific powers for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement for a period of four years a concerted project in the field of cellular ageing and decreased functional capacity of organs, hereinafter referred to as 'the project'.

The project shall consist in coordination at Community level of the research described in Annex I, which forms part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

(1) OJ No C 299, 12. 12. 1977, p. 47.
(2) Opinion delivered 23 and 24 November 1977 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No C 7, 29. 1. 1974, p. 2.

Article 3

The maximum financial contribution by the Community to such a project will be 400 000 units of account, the unit of account being defined by the relevant Financial Regulations.

Article 4

To facilitate the execution of the project, a concerted action Committee on Cellular Ageing, hereinafter referred to as 'the Committee' shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. He, in particular, shall assist the Commission in its coordinating action.

The terms of reference and the composition of this Committee are defined in Annex II.

The Committee shall draw up its rules of procedure. Its secretariat will be provided by the Commission.

Article 5

In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member States participating in the project shall exchange regularly all useful information concerning the execution of the research covered by the concerted project and forward to the Commission all information that may be useful for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsable. This information shall be treated as confidential if so requested by the Member State which provides it.

The Commission shall prepare yearly progress reports on the basis of the information supplied and shall forward them to the Member States and to the European Parliament.

At the end of the coordination period, the Commission shall, in agreement with the Committee, forward to the Member States and to the European Parliament a general report on the execution and results of the coordination action. The Commission shall publish this report six months after it has been forwarded to the Member States unless a Member State objects. In this case the report shall be distributed, at their request, solely to institutions and undertakings whose research and production activities justify access to the results of the research carried out under the project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

1. In accordance with the provisions laid down in Article 228 of the Treaty establishing the EEC, the Community may conclude Agreements with other States involved in European cooperation in the field of scientific and technical research (COST) with a view to extending the coordination which is the subject of this Decision to research undertaken in these States.

2. The Commission is hereby authorized to open negotiations for the conclusion of Agreements of the type referred to in the preceding paragraph.

Article 7

This Decision shall come into force on the 1 January 1978.

Done at Brussels, 13 February 1978.

For the Council

The President

P. DALSAGER

ANNEX I

RESEARCH PROGRAMME RELATING TO CELLULAR AGEING AND DECREASED FUNCTIONAL CAPACITY OF ORGANS

(Concerted project)

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is exported to cover the following topics :

1. Cellular basis of liver ageing : biophysical and biochemical studies at organ, cellular and subcellular level of the progressive, age-associated functional alterations, including comparative studies in other cell types.

2. The immune response during ageing : oriented studies both in animals and, to a limited extent, in humans of the age-induced changes in the immune system with emphasis on immunodeficiencies and possibilities of therapy.

3. Ageing of the crystalline lens : physiological, morphological and biochemical studies in human and animal tissues of the age-related functional alterations leading to senile cataracts.

The coordination will be carried out by the following medical research organizations or institutes of the various participating Member States :

Belgium :	FNMR — Fonds national de la recherche medicale, Bruxelles.
Denmark :	Danish Medical Research Council, Copenhagen.
France :	INSERM — Institut national de la santé et de la recherche médicale, Paris.
Germany :	— Institut für experimentelle Ophthalmologie der Universität Bonn, Abteilung Biochemie des Auges, Bonn-Venusberg ; — Max-Planck-Institut für Immunbiologie, Freiburg-Zähringen.
Ireland :	Medical Research Council of Ireland, Dublin.
Italy :	CNR — Consiglio Nazionale della Ricerca, Roma.
Netherlands :	— Laboratorium voor Biochemie, Universiteit van Nijmegen, Nijmegen ; — Institut de Gérontologie Expérimentale TNO, Rijswijk ; — Centraal Laboratorium Bloed Transfusiedienst, Amsterdam.
United Kingdom :	MRC — Medical Research Council, London.

These countries will contribute research under the three topics mentioned above.

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED ACTION COMMITTEE ON CELLULAR AGEING AND DECREASED FUNCTIONAL CAPACITY OF ORGANS

1. The Committee shall :

   1.1. contribute to the optimum execution of the programme by giving its opinion on all of its aspects ;

   1.2. evaluate the results and draw conclusions as regards their application ;

   1.3. be responsible for the exchange of information referred to in the first subparagraph of Article 5 ;

   1.4. keep abreast of national research being done in the fields covered by the concerted project, and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and to the Member States participating in the project. The Commission shall forward these opinions to the CREST.

3. The Committee shall be composed of persons responsbile for coordinating the national contributions to the programme, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 13 February 1978

adopting a concerted project of the European Economic Community in the field of extracorporeal oxygenation (medical and public health research)

(78/169/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, by virtue of Article 2 of the Treaty establishing the European Economic Community, the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standards of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted projects and that whenever it proves desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, in its resolution of 14 January 1974 relating in particular to the coordination of national policies in the field of science and technology (4), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a concerted Community research action in the field of extracorporeal oxygenation is likely to contribute effectively to the achievement of the above-mentioned aims;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of four years;

Whereas the execution of such research as described in Annex I will require a financial contribution of about 4·1 million units of account from the Member States;

Whereas the Community is empowered to conclude Agreements with third countries in the fields covered by this Decision; whereas it may prove advisable to extend the coordination established by this Decision to third countries participating in European cooperation in the field of scientific and technical research (COST); whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of these agreements and, on the other, negotiations should be opened with the countries referred to as soon as this Decision is adopted;

Whereas the Treaty has not provided the specific powers for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement for a period of four years a concerted project in the field of extracorporeal oxygenation, hereinafter referred to as 'the project'.

The project shall consist in coordination at Community level of the research described in Annex I, which forms part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

(1) OJ No C 299, 12. 12. 1977, p. 47.
(2) Opinion delivered 23 and 24 November 1977 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No C 7, 29. 1. 1974, p. 2.

Article 3

The maximum financial contribution by the Community to such a project will be 360 000 units of account, the unit of account being defined by the relevant Financial Regulations.

Article 4

To facilitate the execution of the project, a concerted action Committee on Extracorporeal Oxygenation, hereinafter referred to as 'the Committee', shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. He shall, in particular, assist the Commission in its coordinating action.

The terms of reference and the composition of this Committee are defined in Annex II.

The Committee shall draw up its rules of procedure. Its secretariat will be provided by the Commission.

Article 5

In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member State participating in the project shall exchange regularly all useful information concerning the execution of the research covered by the project and forward to the Commission all information that may be useful for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. This information shall be treated as confidential if so requested by the Member State which provides it.

The Commission shall prepare yearly progress reports on the basis of the information supplied and shall forward them to the Member States and to the European Parliament.

At the end of the coordintion period, the Commission shall, in agreement with the Committee, forward to the Member States and to the European Parliament a general report on the execution and results of the coordination action. The Commission shall publish this report six months after it has been forwarded to the Member States unless a Member State objects. In this case the report shall be distributed, at their request, solely to institutions and undertakings whose research and production activities justify access to the results of the research carried out under the project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

1. In accordance with the provisions laid down in Article 228 of the Treaty establishing the EEC, the Community may conclude Agreements with other States involved in European Cooperation in the field of scientific and technical research (COST) with a view to extending the coordination which is the subject of this Decision to research undertaken in these States.

2. The Commission is hereby authorized to open negotiations for the conclusion of Agreements of the type referred to in the preceding paragraph.

Article 7

This Decision shall come into force on 1 January 1978.

Done at Brussels, 13 February 1978.

For the Council

The President

P. DALSAGER

ANNEX I

RESEARCH PROGRAMME RELATING TO EXTRACORPOREAL OXYGENATION

(Concerted project)

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics :

1. Continuous improvement in performance of present oxygenator principles with respect to the limitations set by diffusion resistance and blood trauma :
   (a) clinical applicability of introduction of a controlled secondary flow (blood mixing) into present oxygenator principles ;
   (b) studies of the effects of blood flow shear stress on the aggregation and adhesion of platelets, of the interaction of red cells and platelets, and of pharmacologic methods of intervention.
2. Continuous development of alternative oxygenation principles and testing for their clinical applicability.

   Here, research is aiming in particular at further development and joint evaluation of the principle of :
   (a) hyperbaric oxygenation ;
   (b) physico-chemical release of oxygen (from H_2O_2) through membranes containing catalytic activity ;
   (c) liquid oxygenation by using inert liquids (fluorocarbons) for direct gas transfer to the blood.
3. Development of methods for continuous control and dynamic compensation of the patient's respiratory, circulatory and metabolic deficiencies.
   (a) dynamic control system, based on oxygen consumption and carbon dioxide production in the patient, for the regulation of the gas transfer rate in oxygenators ;
   (b) regulation of blood electrolytes and pH in the perfused patient.

The coordination will be carried out by the following medical research organizations or institutes of the participating Member States :

Belgium : FNMR — Fonds national de la recherche médicale, Bruxelles.

Denmark : Danish Medical Research Council, Copenhagen.

France : INSERM — Institut national de la santé et de la recherche médicale, Paris

Germany : — German Heart Centre, Munich ;
— Department of Physiologiy, Technical University, Aachen ;
— MPI, System-Physiology, Dortmund ;
— Department of Physiology, University of Mainz.

Ireland : Medical Research Council of Ireland, Dublin.

Italy : CNR — Consiglio Nazionale della Ricerca, Roma.

Netherlands : — University of Groningen ;
— Eindhoven University of Technology ;
— Department of Physiology, University of Nijmegen ;
— Department of Appl. Physiology and Cryobiology, Central Red Cross Blood Transfusion Services, Amsterdam.

United Kingdom : MRC — Medical Research Council, London.

These countries will contribute research under the three topics mentioned above.

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED ACTION COMMITTEE ON EXTRACORPOREAL OXYGENATION

1. The Committee shall :

   1.1 contribute to the optimum execution of the programme by giving its opinion on all of its aspects ;

   1.2 evaluate the results and draw conclusions as regards their application ;

   1.3 be responsible for the exchange of information referred to in the first subparagraph of Article 5 ;

   1.4 keep abreast of national research being done in the fields covered by the concerted project, and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5 suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and to the Member States participating in the project. The Commission shall forward these opinions to the CREST.

3. The Committee shall be composed of persons responsible for coordinating the national contributions to the programme, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 20 February 1978

adopting a concerted action project of the European Economic Community on the effect of processing on the physical properties of foodstuffs

(78/177/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas pursuant to Article 2 of the Treaty the Community was assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council emphasized that an appropriate approach should be adopted towards the whole range of available ways and means, including joint projects, and that whenever it proves desirable that third States, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas in its resolution of 14 January 1974 relating in particular to the coordination of national policies in the field of science and technology (4), the Council entrusted the Community institutions with the task of ensuring, with the assistance of the Scientific and Technical Research Committee (CREST) the gradual coordination of national policies in the field of science and technology;

Whereas a programme of research in the field of food technology has been proposed by the Swedish delegation to European Cooperation in the field of Scientific and Technical Research (COST); whereas the Council, in its Decision of 16 June 1975, has recognized the interest to the Community of such a programme;

Whereas a concerted action project for Community research in the field of industrial food technology is likely to contribute effectively to the achievement of the abovementioned objectives, and in particular to a more economic use of national resources;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I and are prepared to integrate it into a process of coordination at Community level over a period of three years;

Whereas the execution of the research work as described in Annex I calls for a financial outlay of some 7·5 million European units of account in the Member States taking part therein;

Whereas the Community is empowered to conclude agreements with third States in the fields covered by this Decision; whereas it may prove advisable to extend the coordination established by this Decision to the States participating in COST; whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of these agreements, and on the other, negotiations should be opened with the States referred to, as soon as this Decision is adopted;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas CREST has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement for a period of three years a concerted action project on the effect of processing on the physical properties of foodstuffs (hereinafter called 'the project').

The project shall consist of the coordination at Community level of the research work specified in Annex I, which shall form part of the research programmes of the Member States.

(1) OJ No C 36, 13. 2. 1978, p. 52.
(2) Opinion delivered on 15 December 1977 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No C 7, 29. 1. 1974, p. 2.

Article 2

The Commission shall be responsible for such coordination.

Article 3

The maximum financial contribution by the Community towards coordination shall be fixed at 250 000 European units of account, the European unit of account being defined by the Financial Regulations applicable.

Article 4

To facilitate the execution of the project a Concerted Action Committee on the Effect of Processing on the Physical Properties of Foodstuffs (hereinafter called 'the Committee') shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. He shall, in particular, assist the Commission in its task of coordination.

The terms of reference and composition of this Committee are laid down in Annex II.

The Committee shall draw up its own rules of procedure. Its secretariat will be provided by the Commission.

Article 5

1. In accordance with a procedure to be adopted by the Commission in agreement with the Committee, the Member States participating shall regularly exchange all relevant information concerning the performance of the research covered by the project and forward to the Commission all information that may be useful for coordination purposes.

They shall in addition endeavour to provide the Commission with information relating to the research planned or performed by bodies which are not under their authority.

This information shall be treated as confidential if the Member State which communicates it so requests.

2. The Commission shall prepare yearly progress reports on the basis of the information provided and shall send them to the Member States.

3. At the end of the coordination period, the Commission shall, in agreement with the Committee, send to the Member States and to the European Parliament a succinct report on the performance and result of the project. The Commission shall publish this report six months after it has been sent to the Member States, except where a Member State objects. In this event, the report shall be distributed upon request only to the institutions and undertakings whose research activities justify access to the results of the research carried out under the project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States participating in COST with a view to extending the coordination which is the subject of this Decision to research undertaken in these States.

2. The Commission is hereby authorized to open negotiations for agreements of the type referred to in paragraph 1.

Article 7

This Decision shall come into force on the day of its publication in the *Official Journal of the European Communities.*

Done at Brussels, 20 February 1978.

For the Council

The President

Per HÆKKERUP

ANNEX I

RESEARCH WORK REFERRED TO IN ARTICLE 1

Choice of themes	Apportionment of the research work among the Member States						
	Germany	Belgium	France	Ireland	Italy	Netherlands	United Kingdom
1. *Rheology of liquid foods (viscosity):*							
1.0. no particular product	X	X	X				X
1.1. milk products	X	X	X	X	X	X	
1.2. sugar products	X	X	X				
1.3. cereal products	X	X	X		X	X	
1.4. fruit products				X	X	X	
2. *Sorption (water activity):*							
2.0. no particular product	X		X				
2.2. sugar products	X						
2.4. fruit products					X		
2.6. meat products	X	X	X				
3. *Thermal properties:*							
3.0. no particular product	X	X				X	X
3.4. fruit products					X	X	
3.5. vegetable products					X	X	
3.6. meat products	X	X	X		X		
3.7. fish products							

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE COMMITTEE REFERRED TO IN ARTICLE 4

1. The Committee shall :

   1.1. contribute to the optimum execution of the project by giving its opinion in all aspects of its progress ;

   1.2. evaluate the results and draw conclusions regarding their application ;

   1.3. be responsible for the exchange of information provided for in Article 5 (1) ;

   1.4. keep abreast of national research work being done in the fields covered by the project, in particular by keeping abreast of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader ;

   1.6. have the right to set up, in respect of each of the three physical properties defined in Annex I, a subcommittee to ensure that the programme is properly implemented.

2. The reports and the opinions of the Committee shall be communicated to the Commission and the Member States participating. The Commission shall forward these opinions to CREST and to the Standing Committee on Agricultural Research (SCAR).

3. The Committee shall consist of the project leader and the persons responsible for the coordination of the national programmes appointed by the Member States participating. Members may for the duration of the project be accompanied by experts, subject to a maximum of two experts per Member State participating. A member's term of office may be terminated prematurely by his death or resignation or if the Government of the participating Member State which appointed him requests that he be replaced. His successor shall be appointed for the unexpired period of the original term.

COUNCIL DECISION

of 6 March 1978

adopting a multiannual research and development programme (1978 to 1981) for the European Economic Community in the field of primary raw materials (indirect action)

(78/263/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, pursuant to Article 2 of the Treaty, the Community has the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas, in its resolution of 14 January 1974 on a first action programme of the European Communities in the field of science and technology (3), the Council stated that the whole range of available ways and means should be used as appropriate, including indirect action;

Whereas the Community depends to a great extent on third countries for its supplies of mineral raw materials; whereas these materials will become increasingly scarce throughout the world and it is thus in the Community's interest to increase its self-supply potential and to improve the technologies employed in prospecting for and exploiting mineral resources;

Whereas a Community research project in the field of primary raw materials is likely to contribute effectively to the achievement of the abovementioned objectives, particularly through the discovery of exploitable internal resources and through the development of exportable techniques and technologies;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the European Parliament adopted on 19 April 1977 a resolution on the supply of raw materials to the Community;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion concerning the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

For a four-year period from 1 January 1978, the Community shall carry out a research and development programme in the field of primary raw materials as described in the Annex.

Article 2

The upper limit of expenditure commitments necessary for the implementation of this programme shall be 18 million European units of account, the European unit of account being defined by the Financial Regulations applicable, and the maximum number of staff shall be eight.

Article 3

The Commission shall be responsible for implementing the programme. To assist it in this task an Advisory Committee on Research and Development Programme Management in the Field of Primary Raw Materials shall be established, the terms of reference and composition of which shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (4).

Article 4

During the third year the programme shall be reviewed; this review may lead to a revision of the programme in accordance with the appropriate procedures after the Advisory Committee on Programme Management has been consulted. The European Parliament shall be informed of such revision.

Within the framwork of its general report the Commission shall also submitt a report to the European Parliament on the implementation of the programme.

(1) OJ No C 299, 12. 12. 1977, p. 44.
(2) OJ No C 18, 23. 1. 1978, p. 12.
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No C 192, 11. 8. 1977, p. 1.

Article 5

The European Parliament shall be informed of the results achieved and the funds used.

Article 6

The information resulting from the execution of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research prgrammes for the European Economic Community [1].

Done at Brussels, 6 March 1978.

For the Council

The President

P. DALSAGER

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

RESEARCH AREA I — EXPLORATION

I. A. **Deep-seated and concealed ore deposits in the territory of the Community :**

— target selection through the improvement of geological knowledge.

I. B. **Improvement and development of prospection methods and techniques :**

— geochemical,
— geophysical,
— remote sensing,
— drilling techniques.

RESEARCH AREA II — ORE PROCESSING

II. A. **Feasibility studies and setting up of models**

II. B. **Specific actions in ore processing and metal extraction :**

— *in situ* leaching,
— alternative sources of alumina,
— complex lead-zinc ores,
— chlorination processes and others.

RESEARCH AREA III — MINING TECHNOLOGY

III. A. **Deep mines**

III. B. **High grade — low tonnage deposits**

Research work will be carried out by way of contracts.

COUNCIL DECISION

of 6 March 1978

adopting a programme of research and development for the European Atomic Energy Community on uranium exploration and extraction (indirect action)

(78/264/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission, submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, under the common scientific and technological policy, the multiannual programme of research and development is one of the essential means open to the Community of contributing to the development of nuclear industries and to the acquisition and dissemination of knowledge in the nuclear sector;

Whereas the Community depends to a great extent on third countries for its uranium supply and it is therefore in its interest to develop the resources which exist within its territory;

Whereas Community research and development action in the field of uranium exploration and extraction would contribute to the realization of the abovementioned objective,

HAS DECIDED AS FOLLOWS:

Article 1

A programme of research and development on uranium exploration and extraction, as set out in the Annex, is hereby adopted for a period of three years from 1 January 1978.

Article 2

The upper limit of expenditure commitments necessary for the implementation of this programme shall be three million European units of account, the European unit of account being defined by the financial regulations applicable, and the maximum number of staff shall be three.

Article 3

The Commission shall be responsible for implementing the programme. To assist it in this task, an Advisory Committee on Research and Development Programme Management in the Field of Uranium Exploration and Extraction shall be established, the terms of reference and composition of which shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (3).

Done at Brussels, 6 March 1978.

For the Council

The President

P. DALSAGER

(1) OJ No C 6, 9. 1. 1978, p. 14.
(2) OJ No C 59, 8. 3. 1978, p. 39.
(3) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

1. URANIUM EXPLORATION

1.1. Discovery of uranium provinces :

— studies on uranium geology and metallogeny,
— study of Pb isotopes,
— perfection of techniques for rapid and routine geochemical analysis,
— remote sensing applied to prospecting,
— airborne geochemistry.

1.2. Discovery of specific targets :

— migration of gaseous derivatives of uranium,
— transportation and storage of uranium from solutions,
— direct measurement of uranium *in situ*.

1.3. Calibration of instruments

2. URANIUM EXTRACTION

2.1. Technico-economic feasibility studies

2.2. Research and development projects

2.2.1. *Development of extraction techniques :*

— *in situ* leaching,
— bacterial leaching,
— leaching at high temperature and high pressure,
— extraction from refractory ores and calcines.

2.2.2. *Processing of low-grade ores and wastes :*

— extraction from phosphatic sediments,
— extraction from phosphoric-rock-treatment plants.

2.2.3. *Recovery from low-grade resources :*

— phosphoric acid liquids,
— sea water.

Research work will be carried out by means of contracts.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 17 April 1978

adopting a multiannual research and development programme (1978 to 1980) for the European Economic Community in the field of paper and board recycling (indirect action)

(78/384/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas pursuant to Article 2 of the Treaty the Community has the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas the Community paper and board industry depends to a great extent on third countries for its supply of raw materials; whereas it is therefore in the Community's interest to increase its self-supply potential and to improve the technologies employed in recovering and recycling waste paper and board;

Whereas the Council of the European Communities and the Representatives of the Governments of the Member States meeting within the Council adopted on 17 May 1977 a resolution on the continuation and implementation of a European Community policy and action programme on the environment (3);

Whereas a Community research project in the field of paper and board recycling is likely to contribute effectively to the achievement of the abovementioned objectives, particularly by increasing paper and board recycling and improving the quality of recycled paper;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the European Parliament adopted on 19 April 1977 a resolution on the supply of raw materials to the Community;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

For a three year period from 1 January 1978, the Community shall carry out a research and development programme in the field of paper and board recycling as described in the Annex.

Article 2

The upper limit of expenditure commitments necessary for the implementation of the programme shall be 2·9 million European units of account, the European unit of account being defined by the Financial Regulations applicable, and the maximum number of staff shall be two.

(1) OJ No C 36, 13. 2. 1978, p. 48.
(2) OJ No C 59, 8. 3. 1978, p. 57.
(3) OJ No C 139, 13. 6. 1977, p. 1.

Article 3

The Commission shall be responsible for implementing the programme. It shall be assisted in this task by an Advisory Committee on Programme Management, the terms of reference and composition of which shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (1).

Article 4

The information resulting from the execution of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community (2).

Done at Luxembourg, 17 April 1978.

For the Council

The President

K. HEINESEN

ANNEX

RESEARCH AND DEVELOPMENT PROGRAMME

Research topic I :

Characterization of reclaimed fibres, their upgrading by various processes and the effects of multiple fibre recycling.

Research topic II :

Elimination of the detrimental effect of contaminants in waste paper, including the dispersion of thermoplastic contaminants.

Research topic III :

De-inking, including the relationship between different types of ink and de-inking, and the treatment of effluent from waste-paper recycling plants.

Research topic IV :

Use of urban fibres, including technological characterization of fibres in solid urban waste, and health problems caused by the use of recycled fibres.

The research will be carried out under contract.

(1) OJ No C 192, 11. 8. 1977, p. 1.

(2) OJ No L 255, 20. 9. 1974, p. 1.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 30 May 1978

amending Decision 76/345/Euratom adopting a research and training programme (1976 to 1980) of the European Atomic Energy Community in the field of fusion and plasma physics

(78/470/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Whereas the Council has adopted, by Decision 76/345/Euratom, a research and training programme (1976 to 1980) in the field of fusion and plasma physics ;

Whereas it is necessary to equip the Community with a large Tokamak-type device (JET — 'Joint European Torus') ;

Whereas it is therefore necessary to provide in an adequate manner additional resources for this programme as far as the implementation of the JET Project is concerned, so as to ensure continuity of this programme, which, moreover, comes within the more general context of security of Community energy supplies in the long term ;

Whereas, by virtue of Article 3 of Decision 76/345/Euratom, the Commission will submit to the Council in 1978 a review proposal designed to replace the present programme with a new five-year programme as from 1 January 1979, which will include the continuation of the JET Project,

HAS DECIDED AS FOLLOWS :

Article 1

Article 2 of Decision 76/345/Euratom shall be supplemented by the following paragraph :

'In addition to the appropriation and the staff shown in the first paragraph, the ceiling of commitments of expenditure required for the implementation of the JET Project shall be fixed at 102·4 million European units of account, this unit of account being defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (2), and the maximum staff required for this project shall be fixed at 150 temporary staff within the meaning of Article 2 (a) of the conditions of employment of other servants of the European Communities.'

Article 2

The Annex to Decision 76/345/Euratom shall be supplemented by the following paragraph :

(1) Opinion delivered on 12. 5. 1978 (not yet published in the Official Journal).

(2) OJ No L 356, 31. 12. 1977, p. 1.

'6. The programme defined above is completed by the implementation of the JET Project to which is allocated a maximum sum estimated at 102·4 million European units of account and a maximum staff of 150 temporary agents. The sum indicated is to finance the first half of the construction phase of the JET Project with a participation rated at 80 %.'

Done at Brussels, 30 May 1978.

For the Council

The President

I. NØRGAARD

COUNCIL DECISION

of 30 May 1978

on the establishment of the 'Joint European Torus (JET), Joint Undertaking'

(78/471/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Articles 46, 47 and 49 thereof,

Having regard to the opinion of the Commission, in particular upon the size and the timetable of financing of the Joint Undertaking,

Having regard to the report from the Commission,

Having regard to the proposal from the Commission,

Whereas the Fusion Programme of the European Atomic Energy Community provides for the construction, operation and exploitation of a large Tokamak machine ('Joint European Torus' : JET Project) ;

Whereas the implementation of the JET Project will constitute an important stage in the aim of the Fusion Programme to reach the status of controlled thermonuclear fusion applications from which the Community could derive benefit, in particular in the more general context of the security of its long-term energy supply ;

Whereas the scale and scientific and technological complexity of the Project as well as its dimensions and cost render necessary a joint effort in the form of an organization able to guarantee the maintenance of the Community character of the Project and permit, on the one hand, effective interaction and cooperation between the Project and the laboratories associated with the Fusion Programme and, on the other hand, the concentration of the financial and personnel resources under one management which shall be entirely responsible for the execution of the Project ;

Whereas the Community and Sweden concluded an Agreement on 10 May 1976 for cooperation in the field of controlled thermonuclear fusion and plasma physics, and that consequently a Swedish organization is participating in the JET Project,

HAS DECIDED AS FOLLOWS :

Article 1

For the implementation of the JET Project, there shall be established a Joint Undertaking within the meaning of Chapter V of the Treaty for a duration of 12 years beginning on 1 June 1978.

The name of the Undertaking shall be 'Joint European Torus (JET), Joint Undertaking'.

Its aim shall be to construct, operate and exploit, as part of the Community Fusion Programme and for the benefit of the participants therein, a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus — JET) in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor.

JET will be constructed at the seat of the Joint Undertaking, situated in the United Kingdom of Great Britain and Northern Ireland at Culham in Oxfordshire.

Article 2

The Statutes of the 'Joint European Torus (JET), Joint Undertaking', annexed to the present Decision, are hereby adopted.

Article 3

This Decision shall be published in the *Official Journal of the European Communities* and shall take effect from 1 June 1978.

Done at Brussels, 30 May 1978.

For the Council

The President

I. NØRGAARD

STATUTES
OF THE 'JOINT EUROPEAN TORUS (JET), JOINT UNDERTAKING'

Article 1

Name, Seat, Members

1.1. The name of the Joint Undertaking shall be 'Joint European Torus (JET), Joint Undertaking'.

1.2. The seat of the Joint Undertaking shall be at Culham, Oxfordshire, in the United Kingdom of Great Britain and Northern Ireland.

1.3. The Joint Undertaking shall have the following Members :

the European Atomic Energy Community (hereinafter referred to as Euratom),

the Belgian State (hereinafter referred to as Belgium), acting for its own part (Laboratoire de Physique des Plasmas of the École Royale Militaire) and on behalf of the Université Libre de Bruxelles (Service de Chimie-Physique II of the ULB),

the Commissariat à l'Énergie Atomique, France, (hereinafter referred to as CEA),

the Comitato Nazionale per l'Energia Nucleare, Italy, (hereinafter referred to as CNEN),

the Consiglio Nazionale delle Ricerche, Italy, (hereinafter referred to as CNR),

the Forsøgsanlæg Risø, Denmark, (hereinafter referred to as Risø),

the Grand Duchy of Luxembourg (hereinafter referred to as Luxembourg),

Ireland,

the Kernforschungsanlage Jülich GmbH, Federal Republic of Germany, (hereinafter referred to as KFA),

the Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. — Institut für Plasmaphysik, Federal Republic of Germany, (hereinafter referred to as IPP),

the National Swedish Board for Energy Source Development (hereinafter referred to as the Board),

the Stichting voor Fundamenteel Onderzoek der Materie, the Netherlands, (hereinafter referred to as FOM),

the United Kingdom Atomic Energy Authority (hereinafter referred to as the Authority or the host organization).

Article 2

Object and location

2.1. The object of the Joint Undertaking shall be to construct, operate and exploit as part of the Euratom Fusion Programme and for the benefit of the participants in this programme a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus — JET) (hereinafter referred to as 'the Project') in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor.

2.2. The JET device and its auxiliary facilities shall be constructed at Culham, according to the general design set out in the report EUR-JET-R5 'The JET Project — design proposal' as may be modified in accordance with the present Statutes.

Article 3

Organs

3.1. The organs of the Joint Undertaking shall be the JET Council and the Director of the Project.

3.2. The JET Council shall be assisted by a JET Executive Committee and may seek the advice of a JET Scientific Council.

Article 4

JET Council

4.1. *Composition, right of vote*

4.1.1. The Members of the Joint Undertaking shall be represented in the JET Council as follows, the vote of each pair of representatives being weighted as indicated :

Representing	*Number of representatives*	*Weighting of vote*
Euratom	2	4
Belgium	2	2
CNEN and CNR jointly	2	4
CEA	2	4
Risø	2	2
Ireland	2	1
Luxembourg	2	1
IPP and KFA jointly	2	4
the Board	2	2
FOM	2	2
Authority	2	4

4.1.2. For their adoption acts of the JET Council shall require at least 21 votes in favour.

4.2. *Functions*

4.2.1. The JET Council shall have the responsibility for the management of the Joint Undertaking. It shall take the basic decisions for implementing the Project and exercise overall supervision of the execution of the Project, and report to the Members.

4.2.2. In particular, the JET Council shall :

(a) ensure the collaboration between the associated laboratories and the Joint Undertaking in the execution of the Project, including the establishment in due time of rules on the operation and exploitation of JET ;

(b) approve the agreements governing relations between the host country and/or the host organization and the Joint Undertaking ;

(c) approve the conclusion of agreements regarding cooperation with third countries and with institutions, undertakings or persons of third countries or with international organizations ;

(d) nominate the Director and the senior staff of the Project with a view to their appointment by the Commission or the host organization as appropriate and determine their period of assignment, approve the main structure of the Project Team and decide the procedures for the assignment and management of staff ;

(e) adopt the Financial Regulations in accordance with Article 11.4 ;

(f) in accordance with Article 10 approve the annual budget including establishment of staff as well as the Project Development Plan and the Project Cost Estimates ;

(g) approve the annual accounts and balance sheet ;

(h) decide on any acquisition, sale and mortgaging of land and other titles to real property, as well as on the giving of any sureties or guarantees, taking out shares in other undertakings or institutions, and on any granting or taking of loans ;

(i) approve any proposal involving a significant change in the design of the JET device and its auxiliary facilities ;

(j) issue the annual reports on the current status of the Project and its financial situation, referred to in Article 13.2 ;

(k) have such other powers and perform such other functions, including the establishment of subsidiary bodies, as may be necessary for the purposes of the Project.

4.3. *Meetings, Rules of Procedure*

4.3.1. The JET Council shall meet at least twice a year. Extraordinary meetings shall be convened either at the request of one third of the members of the JET Council or at the request of its chairman, or the Director of the Project. The meetings shall normally take place at the seat. The JET Council shall elect its chairman from among its members. Unless otherwise decided in a particular case the Chairman of the JET Executive Committee and the Director of the Project shall participate in the meetings.

4.3.2. The JET Council shall adopt its Rules of Procedure.

Article 5

JET Executive Committee

5.1. *Composition, right of vote*

The provisions of Article 4.1 shall apply to the representation of the members in the JET Executive Committee and its voting arrangements.

The Chairman of the JET Executive Committee shall be appointed by the JET Council.

5.2. *Functions*

The JET Executive Committee shall assist the JET Council in the preparation of its decisions and shall undertake any other tasks which the JET Council may entrust to it.

The JET Executive Committee shall in particular :

(a) advise the JET Council and the Director of the Project on the status of the Project on the basis of regular reports ;

(b) comment and make recommendations to the JET Council on the Project Cost Estimates and the draft budget including the establishment of staff drawn up by the Director of the Project ;

(c) approve, in accordance with the rules on the award of contracts to be established by the JET Council, the tendering procedure and the award of contracts ;

(d) promote and develop collaboration between the associated laboratories and the Joint Undertaking in the execution of the Project.

5.3. *Meetings, Rules of Procedure*

The JET Executive Committee shall meet at least six times a year. The meetings shall normally take place at the seat of the Joint Undertaking. Subject to the approval of the JET Council, the JET Executive Committee shall draw up its Rules of Procedure.

Article 6

JET Scientific Council

6.1. *Composition*

The JET Council shall appoint the members of the JET Scientific Council and its chairman.

6.2. *Functions*

The JET Scientific Council shall :

(a) upon the request of the JET Council advise on scientific and technical matters, including proposals involving a significant change in the design of JET, its exploitation and its long-term scientific implications ;

(b) perform such other tasks as the JET Council may request it to undertake.

6.3. *Rules of Procedure*

Subject to the approval of the JET Council, the JET Scientific Council shall draw up its Rules of Procedure.

Article 7

The Director of the Project

7.1. The Director of the Project shall be the chief executive of the Joint Undertaking and its legal representative.

7.2. He shall execute the Project Development Plan and direct the execution of the Project within guidelines established by the JET Council to whom he shall be responsible, and he shall supply the JET Council, the JET Executive Committee, the JET Scientific Council and other subsidiary bodies with all information necessary for the performance of their functions.

7.3. In particular, the Director of the Project shall :

(a) organize, direct and supervise the Project Team ;

(b) submit to the JET Council proposals on the main structure of the Project Team, and propose to the JET Council the nomination of senior staff ;

(c) draw up and regularly update the Project Development Plan and the Project Cost Estimates in accordance with the Financial Regulations and submit them to the JET Council ;

(d) draw up, in accordance with the Financial Regulations, the annual draft budget including establishment of staff, and submit it to the JET Council ;

(e) in accordance with the Financial Regulations, keep accounts and inventory records, draw up the annual accounts and the balance sheet, and submit them to the JET Council ;

(f) submit to the JET Council any proposal involving a significant change in the design of JET ;

(g) organize, together with the associated laboratories, special meetings ('workshops') on scientific and technical topics relating to the Project and submit reports on these meetings to the JET Council ;

(h) undertake, where necessary in conjunction with the host organization, steps to obtain the permits and licences required for the construction, operation and exploitation of JET, including buildings, as well as draw up any reports required in this respect ;

(i) be responsible for safety and undertake all organizational measures to meet the relevant safety requirements ;

(j) draw up in accordance with Article 16 rules on the dissemination of information and submit them to the JET Council ;

(k) draw up the annual report on the current status of the Project and its financial situation and such other reports as may be requested by the JET Council and submit them to the JET Council.

Article 8

Project Team

8.1. The Project Team shall assist the Director of the Project in the performance of his duties. Its staff shall be fixed in the staff establishment as defined in the annual budget. It shall be composed of staff coming from the Members of the Joint Undertaking as provided for in point 8.3 and of other personel. The staff of the Project Team shall be recruited in accordance with the provisions of points 8.4 and 8.5 below.

8.2. The composition of the Project Team shall strike a reasonable balance between the need to guarantee the Community nature of the Project, especially in the case of posts for which qualifications of a certain level are required (physicists, engineers, administrative staff at an equivalent level) and the need to give the Director of the Project the widest possible authority in the matter of staff selection in the interests of efficient management. In applying this principle account shall also be taken of the interests of the non-Community Members of the Joint Undertaking.

8.3. The Members of the Joint Undertaking shall make available to the Joint Undertaking qualified scientific, technical and administrative staff.

8.4. Staff made available by the host organization shall remain in the employment of the host organization on the terms and conditions of service of that organization and be assigned by the latter to the Joint Undertaking.

8.5. Unless decided otherwise in special cases in accordance with the procedures for the assignment and management of staff to be decided by the JET Council, staff made available by the Members of the Joint Undertaking other than the host organization as well as other personnel shall be recruited by the Commission for temporary posts in accordance with the 'conditions of employment of other servants of the European Communities' and assigned by the Commission to the Joint Undertaking.

8.6. All staff forming part of the Project Team shall come under the sole management authority of the Director of the Project.

8.7. All staff expenditure, including expenditure related to staff assigned to the Joint Undertaking by the Commission and the host organization shall be borne by the Joint Undertaking.

8.8. Each Member having a contract of Association with Euratom shall undertake to re-employ the staff whom it placed at the disposal of the Project and who were recruited by the Commission for temporay posts, as soon as the work of such staff on the Project has been completed.

8.9. The JET Council shall establish the detailed procedures for assignment and management of staff.

Article 9

Financing

9.1. The expenditure of the Joint Undertaking shall be borne by Euratom 80 % and the Authority 10 %.

The remaining 10 % shall be shared between all Members other than Euratom, having contracts of Association with Euratom in proportion to the Euratom financial participation in the total costs of the Associations, including the general support for priority actions but excluding any additional support for these actions. The annual contribution of such a Member shall be calculated year by year and relate to the Euratom participation in its Association for the previous year, expressed in European units of account.

9.2. All revenue of the Joint Undertaking shall be applied in promoting the objects as defined in Article 2. Subject to Article 21 no payment by way of division of any excess of revenue over expenditure of the Joint Undertaking shall be made to the Members of the Joint Undertaking.

Article 10

Financial year, budgetary procedure

10.1. The financial year shall correspond to the calendar year.

10.2. The Director of the Project shall, before 31 March of each year, transmit to the Members the Project Cost Estimates as approved by the JET Council. The Project Cost Estimates shall include a forecast of annual expenditure for the following five years, taking into account the relevant decisions concerning the Euratom fusion programme. Within this forecast the estimates of revenue and expenditure for the first of those five financial years (preliminary draft budget)

shall be drawn up in such detail as is necessary for the internal budgetary procedure of each Member regarding its financial contribution to the Joint Undertaking. The Director of the Project shall supply the Members with all supplementary information needed for this purpose.

10.3. The Members shall communicate to the Director of the Project forthwith their comments on the Project Cost Estimates and in particular on the estimates of revenue and expenditure for the following year.

10.4. Based upon the approved Project Cost Estimates, and taking into account the comments received from the Members, the Director of the Project shall prepare the draft budget for the following year and submit it to the JET Council before 30 September.

10.5. After notification by the Commission of the appropriation relating to its financial contribution to the Joint Undertaking as shown in the finally adopted budget of the European Communities, the JET Council shall adopt the budget of the Joint Undertaking.

10.6. To meet the requirements of Article 171 (3) of the Euratom Treaty, the Director of the Project shall send to the Commission before 31 March of each year the budget adopted for the current year including the estimates of revenue and expenditure referred to in that Article, together with the operating accounts and the balance sheet of the previous year. The Commission shall place them, at the latest together with its preliminary draft budget for the following year, before the Council of the European Communities and the European Parliament.

Article 11

Financial Regulations

11.1. The purpose of the Financial Regulations is to ensure the economic and sound financial management of the Joint Undertaking.

11.2. In particular, they shall include the principal rules on :

(a) the unit of account or currency in which the accounts of the Joint Undertaking shall be kept,

(b) the presentation and structure of the Project Cost Estimates and the annual budget,

(c) the implementation of the annual budget and an internal financial control,

(d) the calculation and payments of contributions by the Members of the Joint Undertaking in accordance with Article 9,

(e) the keeping and presentation of accounts and inventory records as well as the drawing up and presentation of the annual balance sheet,

(f) the procedure regarding calls for tenders, based on non-discrimination among the countries of the Members of the Joint Undertaking, the placing and the terms and conditions of contracts and orders on behalf of the Joint Undertaking.

11.3. As regards the placing of contracts, the Financial Regulations shall provide for the selection of the tenders giving the economically and technically most efficient solution. The Director of the Project shall, in collaboration with the JET Executive Committee and the Members, strive to achieve as wide as possible a distribution of contracts, taking into account the Community nature of the Project.

11.4. The Financial Regulations shall be adopted by the JET Council in agreement with the Commission.

Article 12

Auditing

Within two months after the end of each financial year the Director of the Project shall submit the annual accounts of the preceding year and the annual balance sheet to the Court of Auditors of the European Communities. The audit executed by the Court of Auditors shall be based on records and performed on the spot. The Director of the Project shall present the annual accounts and the annual balance sheet together with the report of the Court of Auditors to the JET Council for approval. The Director of the Project is entitled and, if requested by the JET Council, obliged to comment on the report. The Court of Auditors shall send its report to the Members of the Joint Undertaking, to the Council of the European Communities and to the European Parliament.

Article 13

Project Development Plan, status and other reports

13.1. The Project Development Plan shall specify the plan for the execution of all elements of the Project, in particular work to be performed by the Project Team, by third parties and by the Members of the Joint Undertaking. It shall cover the whole term of the Joint Undertaking and regularly be updated.

13.2. The annual report shall show the current status of the Project, in particular with regard to timetables, cost, performance of the scientific programme, and its position in the Euratom Fusion Programme and in the world-wide development of fusion research.

Article 14

Work to be performed by the Associations

Where contracts of association contain provisions for work to be carried out in support of the Project, such work shall be specified and controlled by arrangements concluded between the Joint Undertaking and the Association concerned, and the cost of such work shall be borne in accordance with the relevant provisions of the contract of association.

Article 15

Support from the host organization

15.1. The host organization shall make available to the Joint Undertaking land, buildings, goods and services required for the implementation of the Project as summarized in the Annex to the present Statutes and under terms outlined therein. The Annex shall form an integral part of the present Statutes.

15.2. Subject to the approval of the JET Council in accordance with Article 4.2.2 (b), the details of such support, as well as the procedures of cooperation between the Joint Undertaking and the host organization, shall be covered by an agreement to be concluded between them.

Article 16

Information and patent rights

16.1. *Information*

16.1.1. All information generated in the execution of the Project, including but not limited to drawings, designs, computations, reports and other documents, know-how and inventions, whether or not patentable, shall be the property of Euratom, subject to the following provisions of this Article.

16.1.2. The Joint Undertaking shall be entitled to use the information referred to in point 16.1.1 without charge for the execution of the Project. The Members of the Joint Undertaking shall be entitled to use such information without charge for their own research purposes.

16.1.3. Each Member of the Joint Undertaking shall be duly kept informed on the progress of the Project through the JET Council and at regular intervals be provided with reports on the progress made and the results obtained (including the reports specified in Article 13 of the present Statutes).

16.1.4.1. The Commission will, in accordance with the provisions of Article 13 of the Euratom Treaty and subject to the conditions contained therein, communicate the reports referred to in point 16.1.3 to the Member States, to persons and undertakings (as defined in Article 196 of that Treaty) as well as to the Government of Sweden and to persons and undertakings established on its territory.

Dissemination of such reports by the Commission to States and to persons and undertakings other than those specified above and dissemination as such of the report by the Joint Undertaking and by its other Members shall be at the discretion of and on conditions approved by the JET Council, but without preventing the customary exchange of views and ideas between scientists.

16.1.4.2. The JET Council shall establish terms and conditions under which the Joint Undertaking and its Members may proceed to dissemination and/or licensing of the infor-

mation and in particular of the drawings, designs, computations, documents, know-how and non-patentable inventions referred to in point 16.1.1.

16.2. *Patents*

16.2.1. Where patentable inventions are made in the execution of the Project the Commission may, on behalf and at the cost of Euratom, file patent applications and obtain patents. The Joint Undertaking shall promptly inform the Commission about inventions and shall in due time forward to the latter any document and information required for filing of the patent applications. The Commission shall transmit to the Joint Undertaking the administrative data and a copy of such patent applications or patents.

16.2.2. Under the patent applications and patents referred to in point 16.2.1 the Joint Undertaking and the Members thereof shall be entitled to royalty-free, non-exclusive, irrevocable licences with the right to grant sublicences after consultation with the Commission.

16.2.3. Under the patent applications and patents referred to in point 16.2.1, the Commission may, in accordance with the provisions of Article 12 of the Euratom Treaty and subject to the conditions contained therein, grant on request non-exclusive licences to the Member States of Euratom, to persons and undertakings (as defined in Article 196 of that Treaty), as well as to the Government of Sweden and to persons and undertakings established on its territory. Granting of non-exclusive licences by the Commission to States, persons and enterprises other than those specified above shall be on the conditions approved by the JET Council.

16.2.4. Should the Commission in regard to any invention, patent application or patent referred to in point 16.2.1 for adequate reasons (including in particular lack of budgetary allocations) intend to waive its right to file, or to abandon patent applications and/or patents, it shall inform the Joint Undertaking and the other Members thereof in due time. If in such event a Member requests assignment of the pertinent Euratom rights, the Commission shall comply with such request and the Member involved shall then be entitled to file patent applications and to pursue or maintain such patent applications and patents as were already filed or granted. If the request for assignment is made by several Members and no agreement can be reached among them on a sole assignee, then the Commission shall refer the matter to the JET Council for decision.

16.2.5. In regard to any invention, patent application or patent referred to in point 16.2.4 and assigned to a Member of the Joint Undertaking, or filed and obtained by such Member after assignment, Euratom shall be granted a royalty-free, non-exclusive licence for its own research purposes, and the licence and sublicensing rights granted to the Joint Undertaking and the other Members thereof shall be maintained and extended to the inventions, patent applications and patents filed and obtained after assignment.

16.3. *Other provisions*

16.3.1. Any contract or order concluded by the Joint Undertaking shall contain provisions to the effect that the rights conferred and obligations laid upon the Joint Undertaking and its Members under this Article shall not be affected by the terms and conditions of such contracts and orders.

16.3.2. The rights conferred and obligations laid upon the Members of the Joint Undertaking by the provisions of this Article shall subsist after the winding up of the Joint Undertaking.

16.3.3. Each Member of the Joint Undertaking, while retaining full ownership, shall undertake to make available free of charge to the Joint Undertaking any information and invention required for the sole purpose of the execution of the Project unless it cannot do so by reasons of obligations to third parties.

In particular, the Commission shall make available free of charge to the Joint Undertaking all information acquired under contracts and orders implemented under the JET Design Agreement.

16.3.4. The provisions of this Article shall apply without prejudice to applicable national laws relating to inventions made by employed inventors.

Article 17

Liability and insurance

17.1. The contractual liability of the Joint Undertaking shall be governed by the relevant contractual provisions and by the law applicable to the contract in question.

17.2. In the case of non-contractual liability, the Joint Undertaking shall make good any damage caused by it, to such extent as the Joint Undertaking is subject to a legal liability under the relevant national law.

17.3. Any payment by the Joint Undertaking for covering the liability referred to in points 17.1 and 17.2 and the costs and expenses incurred in connection therewith shall be considered as expenditure of the Joint Undertaking within the meaning of Article 9.

17.4. The Director of the Project shall propose to the JET Council any necessary fire and other insurance, and the Joint Undertaking shall take out such insurance as the JET Council may direct.

Article 18

Accession by new Members

18.1. The Joint Undertaking is open for accession by new Members which can provide a useful contribution to the object of the Joint Undertaking.

18.2. Any request for accession shall be addressed to the Director of the Project, who shall transmit it to the JET Council. The JET Council shall decide whether the Joint Undertaking shall start negotiations with the applicant on the conditions of accession. In case of a positive decision, the Joint Undertaking shall negotiate the conditions of accession and submit them to the JET Council for agreement. If the JET Council agrees the Commission shall submit to the Council of the European Communities the proposal on the amendment of the present Statutes required for the accession of the applicant concerned.

Article 19

Duration of the Joint Undertaking

19.1. The Joint Undertaking shall be established for a period of 12 years.

19.2. According to progress in achieving the object of the Joint Undertaking as defined in Article 2 that period may be prolonged by amending the present Statutes in accordance with the provisions of Article 24. It may be shortened either by such an amendment or by action under Article 20.6 or Article 21.1.

Article 20

Withdrawal of membership

20.1. For a period of five years from the establishment of the Joint Undertaking, its Members shall not be allowed to withdraw their membership.

20.2. After that period each Member shall be entitled to give notice of withdrawal by registered letter to the Director of the Project, such withdrawal taking effect at the end of the financial year following that in which notice of withdrawal is given. However, the host organization shall not be allowed to withdraw.

20.3. If a Member gives notice of withdrawal, the JET Council shall decide within six months whether the Joint Undertaking should continue or be wound up.

20.4. If the JET Council decides that the Joint Undertaking should continue the Commission, acting on a proposal from the JET Council, shall submit to the Council of the European Communities the amendments to the present Statutes required for the continuation of the Joint Undertaking.

20.5. The Member so withdrawing shall bear its share as specified in Article 9 of all commitments and liabilities incurred by the Joint Undertaking up to the date when its withdrawal becomes effective. Furthermore it shall not be entitled to claim from the Joint Undertaking or from any of its Members any compensatory payment with respect to the assets of the Joint Undertaking.

20.6. If the JET Council requests the winding up of the Joint Undertaking the Commission will submit to the Council of the European Communities the proposal on the winding up of the Joint Undertaking. If the Council of the European Communities decides to wind up the Joint Undertaking, Article 21 shall apply.

20.7. Subject to point 20.5 Members, having concluded with Euratom a cooperation agreement in accordance with Article 101 of the Euratom Treaty or a contract of association pursuant to such an agreement, shall cease to be a Member of the Joint Undertaking upon termination of that cooperation agreement.

Article 21

Winding up

21.1. If the Joint Undertaking terminates, either by expiry of its term as specified in Article 19 or by decision of the Council of the European Communities, the Joint Undertaking shall be wound up.

21.2. For the purpose of conducting the proceedings in winding up the Joint Undertaking the JET Council shall appoint one or more liquidators, who shall comply with the instructions issued by the JET Council.

21.3. When the Joint Undertaking is being wound up, it shall :

— return to the host organization any physical support item made available to it in accordance with Article 15,

— assign to the host organization the JET device, buildings and any other fixed or movable assets acquired by the Joint Undertaking.

The host organization shall at its own cost and liability :

— recover possession of the physical support items mentioned above,

— take over and assume responsibility for the JET device, buildings and any other fixed or movable assets assigned to it.

21.4. If the Joint Undertaking decides to cease using any support item or any fixed or movable asset before the winding up, the provisions of point 21.3 shall apply to such specific support item or asset unless the Joint Undertaking decides to dispose otherwise of assets acquired by it.

21.5. If within a period of six months after the termination of the Joint Undertaking in accordance with point 21.1, the Commission requests the use for the Community fusion activity of any asset acquired by the Joint Undertaking and assigned to the host organization in accordance with points 21.3 and 21.4, the host organization shall make such asset available without any charge for depreciation or rent. This shall not prevent the decommissioning of the JET device.

21.6. When fixed and movable assets have been dealt with as provided in point 21.3, any further assets (cash, amounts receivable, intangible assets) shall be used to cover the liabilities of the Joint Undertaking and the costs relating to its winding up except those to be borne by the host organization in accordance with point 21.3. Any surplus shall be distributed among the Members existing at the time of the winding up in proportion to their total contribution actually made by them in accordance with Article 9. In the event of a deficit, this shall be met by the existing Members in the same proportions as those in which their contributions have been assessed for the financial year then current in accordance with Article 9.

Article 22

Subsidiary reference to national law

22.1. In any matter not covered by these Statutes, English law shall apply.

22.2. Without prejudice to the provisions of the third paragraph of Article 49 of the Euratom Treaty, for the avoidance of doubt the Joint Undertaking shall not be regarded as a company within the meaning of the Companies Act 1948 and 1967 of the United Kingdom.

Article 23

Assignment of Commission rights

23.1. The Commission shall assign free of charge to the Joint Undertaking any title, rights and obligations with respect to the ownership of materials and other goods supplied or to be supplied under contracts and orders placed for the Project prior to the establishment of the Joint Undertaking to the extent allowed in such contracts and orders.

23.2. The Joint Undertaking shall take over any contract and order placed by the Commission for the Project prior to the establishment of the Joint Undertaking. Immediately after the establishment of the Joint Undertaking the latter and the Commission shall take all necessary steps for this purpose.

Article 24

Amendments

24.1. Any Member of the Joint Undertaking may submit to the Jet Council proposals for amendment of the present Statutes.

24.2. If the JET Council agrees to the proposals, the Commission will make a proposal to the Council of the European Communities for their approval in accordance with Article 50 of the Euratom Treaty.

24.3. The amendments shall enter into force on the date on which the Council of the European Communities shall have approved the amendments, or on such other date as that Council may decide.

Article 25

Disputes

25.1. Any dispute either between Members of the Joint Undertaking or between one or more Members and the Joint Undertaking concerning the interpretation or application of the present Statutes, which is not settled by the good offices of the JET Council, shall, at the request of any party to the dispute, be submitted to an arbitration tribunal.

25.2. The arbitration tribunal shall be established in each individual case. It shall be composed of three members nominated jointly by the parties to the dispute. The members of the arbitration tribunal shall elect the chairman from amongst themselves.

25.3. If the parties in the dispute fail to nominate one or several members of the arbitration tribunal within two months of the request for submission of a dispute to the arbitration tribunal, or if within one month of the nomination of the members these members do not elect a chairman, such member or members or the chairman shall be nominated by the President of the Court of Justice of the European Communities at the request of one of the parties to the dispute.

25.4. The arbitration tribunal shall reach its decision by a majority of votes. Such decision shall be binding and final.

Article 26

Definitions

For the purpose of these Statutes the following terms shall have the following meaning :

(a) 'Euratom Fusion Programme' means the research and training programme (1976 to 1980) in the field of fusion and plasma physics adopted by decision of the Council of the European Communities, pursuant to Article 7 of the Euratom Treaty, as well as any further programme in that field adopted by Council Decision ;

(b) 'Contract of Association' means a Contract of Association concluded between Euratom and any Member of the Joint Undertaking which provides for the execution of part of the Euratom Fusion Programme ;

(c) 'Association' means the Association established by such a Contract of Association ;

(d) 'Associated Laboratory' means the laboratory or laboratories of each Member of the Joint Undertaking associated with Euratom by a Contract of Association, in which the programme of that Association is being executed ;

(e) 'JET Design Agreement' means the Agreement No 030-74-1 FUAC (Doc. XII/524/73) concluded between Euratom and the Members of the Joint Undertaking (other than Ireland and Luxembourg) on 4 April 1974 and modified by successive Supplementary Agreements ;

(f) 'Commission' means the Commission of the European Communities.

Annex to the Statutes
of the Joint European Torus (JET), Joint Undertaking

SUPPORT FROM THE HOST ORGANIZATION

1. In addition to the financial participation specified in Article 9 of the Statutes the host organization shall bear the cost of putting the JET site into 'standard condition'.

2. The requirements for the 'standard condition' are summarized as follows :

(a) *Land* to be put at the disposal free of charge of the JET Project allowing for the construction and possible extension of all JET buildings and auxiliary services, including tritium handling and handling of radioactive materials.

(b) *Main services* to be supplied to the site boundary are : water, gas, electricity, sewage and drainage, alarm systems, telephone and telex.

(c) *Licensing and all official permits* needed for the erection and installation of buildings and services and the operation of the experiment including its operation under tritium.

(d) *Roads*, paths and bridges as necessary to provide access to the site boundary for the maximum size and weights of JET equipment and for staff and visitors.

(e) *Temporary accommodation*

(i) offices, including drawing offices, and if necessary small laboratories and workshops, to house the estimated growth of JET staff ;

(ii) storage for housing equipment and supplies arriving prior to completion of permanent accommodation ;

(iii) furniture and services for this temporary accommodation.

This accommodation will be free of charge for the first two years of the Project.

(f) *Permanent accommodation*

This includes all working and storage accommodation other than the specific JET buildings which are referred to in the EUR-JET-R5 report and whose cost is included in the JET Project Estimate. The non-specific buildings to serve the Project are in net working space :

Offices	2 400 m²
Small laboratories	2 000 m²
Workshops	600 m²
Ancillary areas	1 000 m²
	6 000 m²

These permanent buildings are to be provided with all necessary services and furniture for a suitable rental.

(g) *Power supplies*

Installation and maintenance up to the site boundary of power supplies able to provide up to 500 MW and security line, with characteristics as specified in the EUR-JET-R5 report.

(h) *Cooling system*

Water cooling capability of 25 MW continuous, capable of extension to 50 MW later, either by direct water supply or by recirculation with cooling towers.

(i) *Computing*

Direct connection of the JET Project with a suitable computer.

3. In addition to providing the items summarized above the host organization shall undertake to supply, at proven cost (unless any of them are offered free), such technical, administrative, and general services as are required by the Joint Undertaking. Examples of such services are :

— Safety (doctor, fire brigade, watchmen) ;
— Workshop approximately 1 000 m^2 ;
— Site services (waste disposal, cleaning, gardening) ;
— Restaurant ;
— Documentation (library, translation, reproduction) ;
— Communications (mail, telephone, messenger, telex, conference rooms) ;
— Office equipment ;
— Welfare (schooling, housing, language courses) ;
— General support services ;
— Computer time ;
— Electricity ;
— Water ;
— Gas ;
— Heating.

4. In addition to providing staff in accordance with Article 8 of the Statutes the host organization shall provide support staff, at proven cost, to meet the requirements of the JET Project. Such staff shall be under the management authority of the Director of the Project.

5. The host organization shall be responsible for the disposal of radioactive waste at the expense of the Joint Undertaking. Upon the termination of the Joint Undertaking in accordance with Article 21.1 of the Statutes, the cost of the disposal of radioactive waste will fall upon the host organization.

6. Forward estimates of the requirements of the Joint Undertaking for services and support staff in accordance with paragraphs 3 and 4 above shall be agreed between the Joint Undertaking and the host organization in a manner to be specified in the agreement to be concluded between them in accordance with Article 15.2 of the Statutes.

COUNCIL DECISION

of 30 May 1978

on the conferment of advantages on the 'Joint European Torus (JET), Joint Undertaking'

(78/472/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 48 thereof,

Having regard to the proposal from the Commission,

Having regard to the Agreement of 3 May 1978 between the Community and the Government of the United Kingdom,

Whereas the 'Joint European Torus (JET), Joint Undertaking' established by Council Decision 78/471/Euratom for a duration of 12 years has for object the construction, operation and exploitation, as part of the Community Fusion Programme and for the benefit of the participants therein, of a large torus facility of Tokamak-type and its auxiliary facilities (Joint European Torus — JET) in order to extend the parameter range applicable to controlled thermonuclear fusion experiments up to conditions close to those needed in a thermonuclear reactor;

Whereas JET will be constructed in the United Kingdom of Great Britain and Northern Ireland, at Culham, in the County of Oxford;

Whereas the implementation of the JET Project will constitute an important stage in the advancement of the Fusion Programme to the status of controlled thermonuclear fusion applications from which the Community could derive benefit, in particular in the more general context of the security of its long-term energy supply;

Whereas the entry and residence in each Member State for nationals of Member States made available to the Joint Undertaking and for their spouses and dependent members of their families are ensured by the EEC Treaty and its implementing Regulations;

Whereas because of the particular nature of the JET Project and its importance for the development of controlled thermonuclear fusion research and in order to promote a sound and economic management of the Joint Undertaking there is a need to confer on the Joint Undertaking certain advantages provided for in Annex III to the Treaty,

HAS ADOPTED THIS DECISION:

Article 1

The Member States shall confer on the 'Joint European Torus (JET), Joint Undertaking', as long as it exists, and within the scope of its official activities the following advantages provided for in Annex III to the Treaty:

Paragraph 4 of Annex III:

Exemption from all duties and charges levied upon acquisition of immovable property and from all registration and recording charges.

Paragraph 5:

Exemption from all direct taxes to which the Joint Undertaking, its property, assets and revenue might otherwise be liable.

Paragraph 6:

Exemption from all customs duties and charges having equivalent effect and from all prohibitions and restrictions on imports or exports, whether of an economic or of a fiscal nature, with regard to:

(a) scientific and technical equipment, excluding building materials and equipment for administrative purposes;

(b) substances which have been or are to be processed in the Joint Undertaking.

Paragraph 7:

Within the scope of paragraph 7 the Joint Undertaking may transfer without restriction in the currency of a Member State its holdings in the currency of another Member State, to the extent necessary to enable them to be used for the objects of the Joint Undertaking. The Joint Undertaking may freely make use of amounts in the currencies of non-Member States derived from the contributions of its Members.

Article 2

This Decision is addressed to the Member States and to the 'Joint European Torus (JET), Joint Undertaking'.

Done at Brussels, 30 May 1978.

For the Council

The President

I. NØRGAARD

ESTABLISHMENT OF A RESEARCH PROGRAMME

'Industrial Hygiene in Mines'

I. INTRODUCTION

Since 1957 three research programmes related to dust control and health in mines have been implemented in pursuance of Article 55 of the European Coal and Steel Community Treaty. These programmes have had total credit of 12 900 000 units of account, the third programme, 'Health in mines', having credit of six million units of account over five years, commencing in 1971. The credit allocated to the third programme has been exhausted in giving aid to 92 research projects.

The protection of the health of miners in the coal and ironstone mines and the amelioration of their working conditions are continuing commitments and it is proposed that a further research programme, 'Industrial hygiene in mines' be instituted with a credit of 7 000 000 European units of account (EUA) for a period of five years.

It is intended that studies in the programme will relate essentially to matters concerning dust and noxious gases but some attention will also be given to problems of noise, visibility and climate.

II. PREVIOUS RESEARCH

Bearing in mind the pneumoconiosis problem in mining the research hitherto has considered essentially all aspects of the prevention of this disease and in addition the problems posed by mine air pollutants other than dust, notably those arising from the use of diesel powered machinery and explosives underground.

The three main areas of research encompassed by the three programmes have been:

1. technical methods of environmental control;
2. monitoring of the environment;
3. the relationship between environmental factors and health.

Valuable progress has been made from the research projects undertaken and a considerable amount of the knowledge gained from them has already had practical application in the coal and iron-ore mines of the Community. In the third programme, many of the projects of which are still going on, the three main fields covered were those detailed above and the following gives information on some of the projects conducted in those fields.

1. Technical methods of environmental control

Technical developments have necessitated adapting existing methods of dust control to meet the demands posed by the new, more difficult conditions and the development and testing of new control methods to meet the ever more demanding new machinery and methods of exploitation.

Much has been learned about the factors affecting the production of dust and its dispersal into the mine ventilation. This has led to improvements in the design and operation of winning machines, particularly involving reduced numbers of cutting picks on drums and discs and reduction in pick speeds, and in the application of processes to effect improved dust prevention and suppression.

High efficiency dust collectors have been successfully developed for drivages and experimental systems for face machines have achieved tangible success.

Results have been encouraging in the study of air curtain technology to provide an enclosed area of acceptable conditions and also to facilitate dust extraction. Success has also been achieved in dust control by the use of more conventional screening measures.

The study of dust formation and its reduction in face workings during the movement of powered face supports has resulted in the use of plastic sheeting between the support canopies and the roof and the development of water-powered extractors between canopies to entrain dust and deposit it in the waste.

Dust control at underground coal breakers also received attention and it has been shown that adequate screening and automatic water spray application can ameliorate conditions. Tests showed that the varying power consumption of the breaker is the most suitable factor to regulate water spraying.

A wider knowledge has been gained of the application of water infusion and the use of additives both for water infusion and direct application with dust suppression water. Results achieved with additives have been variable but improvements in dust conditions have been noted in cases where they were used in connection with infusion, plough track spraying and mineral transportation.

Infusion processes were developed for the working of thick seams with emphasis on minimum maintenance and supervision and monitoring of the operation. Studies have also been undertaken to determine the movement and distribution of the water in the coal seam and to try to predict the effectiveness of infusion. A comprehensive manual on water infusion was produced.

To achieve more effective dilution of dust and fumes improved ventilation was obtained in the Lorraine iron-ore mines by the drilling of large diameter bore holes. After initial pilot boring of 400 mm diameter, raise boring, 3·6 m diameter, was done in 13 holes over a period of three years. Inspection of the holes is done by a magnetoscopic film camera suspended in the shafts, thus obviating the necessity for persons to be in them.

2. Monitoring of the environment

Research has shown the value of gravimetric sampling as a reliable and accurate technique and the selective gravimetric sampling of respirable dust is now accepted as the standard method of measurement in British, French and German coal mines. In Belgium gravimetric measurement of total dust is used. Continuous shift-length sampling at fixed points is also in general use. Thus comparisons between the different countries are now easier to undertake and a current joint research is comparing assessments of dustiness on coal faces in the four countries using the different national sampling instruments and methods of sampling and evaluation.

Dust surveillance procedures using both static and personal samplers have been studied with a view to securing the efficient and economical coverage of all workplaces.

There is complete agreement on the need to be able to continuously indicate and/or record airborne dust conditions as an aid to dust control and to this end research has been devoted to instrument design and development. Several prototypes of one instrument developed, having such facilities and also the facility to telemeter the information, are being evaluated in mines throughout the Community.

Research has commenced on the problem of measuring the larger inhaled dust particles.

During the course of the third programme a method of measuring full shift exposures to nitrous fumes has been developed for coal mining use. This is achieved through the use of an attachment to a dust sampler so that both gas and dust are sampled together.

3. Environmental factors and health

Epidemiological studies in the mining countries of the Community have shown essentially similar relationships between pneumoconiosis risk and respirable dust concentration but there exist important differences in the pneumoconiosis risk between collieries and coal fields, due apparently to differences in the specific toxicity of the dusts. These differences cannot yet be explained in terms of the quartz and other mineralogical components of the dust. A four-nation project to examine relationships between epidemiological findings and dust toxicity is currently being pursued.

Research has been undertaken in the field of air pollution by diesel vehicles and shot-firing underground. In the ironstone mines of France this has led to the use of diesel engines emitting less pollutants and current research relates to the possible use of turbines underground and the study of soot in the fumes from diesel engines.

Noise has recently assumed increased importance in connection with occupational health and research is being undertaken to assess noise levels and draw up a noise plan for an ironstone mine with a view to effecting the attenuations shown to be necessary. This work complements the comprehensive list of projects relating to noise being done in the ergonomics research programme.

III. ASSOCIATED ACTIVITIES

In addition to this research on dust control and health in mines the Community aids research relating to safety in mines, a new Community programme, 'Safety in mines', being established in 1976 with credit of 7·5 million EUA over five years. Also in the field of industrial health and safety the Community has programmes on 'Ergonomics', 'Chronic respiratory diseases' and 'Pollution control in the iron and steel industries'.

In addition to research of a social nature coming under the Directorate-General for Employment and

Social Affairs, Direction 'Coal' of Directorate-General 'Energy' financially aids technical and economic research relating to coal and iron-ore mining, account being taken of health and safety matters associated with the research. Also, the Directorate-General 'Research, Science and Education' has a comprehensive research programme concerning the environment and this contains matters which relate closely to industrial hygiene.

To effect satisfactory research in all these fields entails close cooperation between all the relevant disciplines and in the formation of a new programme due account will have to be taken of the research done and being done in the other programmes. Particularly close cooperation will be necessary when different disciplines are touching on the same subject, both in the preparation and the execution of a new programme for mines.

IV. THE PROGRAMME

1. General

The third programme related research requirements to the realities of operating techniques and production envisaging a continuation of increased mechanization, concentration of production in fewer producing units and maximization of shift and daily outputs from the units of production.

In general these expected developments have materialized bringing attendant difficulties for the working environment. No doubt their effects will continue to be felt during the period of any new programme, and this, together with further developments in the same direction and further normal technical progress will make the desired working environment more difficult to maintain and improve.

That there will be a need to maintain and indeed improve the mining working environment is indisputable. Bearing in mind the current and projected energy situation, which demands maximum use of the Communities' indigenous fuel supplies, it will be necessary to make the mining industry as safe and healthy as possible in order to attract the necessary recruits and to retain its personnel. Furthermore, natural social pressures will, rightly, demand ever improving standards and conditions, related to research findings, in the working environment and this no more so than in the coal and iron-ore mining industries.

As research progresses and the answers to some problems are found doors are opened to other problems requiring solution. No result is inviolable and there may arise the necessity for modification in the light of changing circumstances. For instance initial research in relation to airborne dust was directed towards protection against silicosis which, in turn, was followed by research directed towards protection against mixed dust pneumoconiosis. Now the stage has been reached to consider pneumoconiosis and other dust related diseases.

Recent research is showing that in coal mines the influence of quartz in the development of mixed dust pneumoconiosis may not be as previously hypothesized and that possibly larger sized airborne particles, not normally considered in the context of pneumoconiosis, may relate to other diseases such as bronchitis and emphysema.

Thus research is a continuing process and the points outlined illustrate the need for further research in the field of health in mines.

It is necessary to ensure that the requisite health factors receive consideration from the outset and are inbuilt with new machinery, systems and methods. In particular the likely effects resulting from the use of new substances underground should not be overlooked. A new programme should be instituted and should, in general, be based on the same three broad fields as the last one. The predominantly pneumoconiosis orientated research should be broadened, although still concentrating essentially on this disease, to include studies bearing on other diseases which may be inter-related both from the disease and the dust aspects. In particular the interplay between the mining noxious gases and dusts and the bearing of the existence of the two on the incidence of the related diseases should be considered. Research into noise, visibility and climate should also be considered.

Any research undertaken must be relevant to the needs of the coal and iron mining industries and give results capable of successful practical application in as short a time as possible. Practical application is vital and must be effected with minimum delay.

In defining the research aims of a programme due account will have to be taken of related research, both within and outside the Commission, to ensure maximum coordination between different programmes and that at the end of the day maximum benefit has been derived from the money and effort expended.

One particular facet of the third research programme was the introduction of joint projects whereby a project was researched together by several institutes in the same or different countries and coordinated by a project leader. This approach should be developed as much as possible as it is felt that a multinational joint approach to a common problem, particularly in the field of industrial health, can repay far more than several individual researches pursued by member countries.

2. Contents of programme

It is proposed that a new programme should continue research in the direction already taken by the previous one, pursue logical consequences arising from this and commence new research considered desirable and relating to the three main fields of research.

The following indicates these main fields and under each are shown pertinent research projects which, although by no means exhaustive, should most certainly be considered. At the same time the approach should be sufficiently broad to allow the inclusion of other topics as considered necessary.

(a) *Technical methods of environmental control*

Under this main heading all research relating to technical methods of controlling the environment would be included, in particular:

Research into the effects of new machines and techniques on the make of dust and other pollutants and the reduction of make by improvements in machine design and techniques.

Research into the improvement of dust collecting techniques, in particular extraction units, as this seems a particularly fertile field. The aim would be to develop more compact and efficient units and these may be of varying types as at present no particular type seems likely to provide a universal solution.

Research into air curtain technology with emphasis on developing and perfecting techniques to provide a fresh-air environment for workmen and an enclosure within which to practise dust control. Also the use of thermal convection air currents for the dilution of dusts and gases.

Research into the design parameters for powered supports, to minimize make of dust in connection with their function underground, and into improvement of the methods of dealing with dust created.

Further studies of the relationship between dust and mine climate with particular reference to the pattern of deposition and the granulometry of airborne dust.

Studies to effect ever more efficient wet suppression systems as this remains, and is likely to remain, the principal suppression method. Further research into the use of additives for dust control purposes in terms of wetting, binding and evaporation retardant capacities.

Further research into water infusion related essentially to the need for automation and remote monitoring of the technique and to the monitoring of the water in the strata.

Research into the design and development of individual protection to give an unpolluted working atmosphere.

In all the researches due attention should be paid to the effects of proposals on other aspects of the working environment not specifically related to the proposal.

(b) *Monitoring the environment*

Research should be pursued to ensure that the measurement of dust in the various countries of the Community can be related reliably one to the other with the goal of general agreement on dust standards, both in terms of concentration and mineral composition, and the measurement of dust. To achieve this greater knowledge of dust formation and deposition related to time and location will be necessary.

Under this broad heading the following should be pursued:

The development and improvement of dust sampling instruments and analytical methods for determining chemical, physical and mineral properties of the mining atmosphere.

The design and development of instruments for continuously recording and indicating dust levels, and also for instantaneous short-term measurement purposes. There should be full development of automated measuring stations with telemetering and data processing facilities.

The development of optimum dust sampling strategies to provide information on dust conditions at workplaces throughout the mine so that dust control effort and personnel deployment can be appropriately directed.

The development of instrumentation for measuring other air contaminants, including airborne radioactive materials and with particular emphasis on further development of measuring techniques for nitrous fumes.

(c) *Environmental factors and health*

Under this heading it is foreseen that a considerable amount of research may emerge.

In particular, the following should be undertaken:

Further studies to try to determine safe dust limits for the employment of persons with early signs of pneumoconiosis.

Research into the specific harmfulness of dusts, involving epidemiological and laboratory studies, to enable levels for airborne dust to be expressed in terms of the actual health hazard involved.

Further research into the effects on health of fumes and noxious gases arising from the use of diesel engines and explosives including synergistic effects with dust in pneumoconiosis and bronchitis.

Studies relating to individual susceptibility to dust and other pollutants.

Research to ensure comparability of the qualitative and quantitative measure of dust concentrations and the uniform radiological assessment of pneumoconiosis throughout the Community, the latter part of the research being undertaken in the medical programme on chronic respiratory diseases.

Studies of new materials in order to assess the health danger which may arise in their use in the mining situation.

Furthermore, as indicated in the introduction, research into the problems of noise, visibility and climate where they constitute a health risk, are considered desirable.

In this section in particular due regard will have to be paid to the necessary multi-disciplinary studies, and to full cooperation and coordination of the work undertaken to ensure that the desired results are achieved.

V. UNDERTAKING OF RESEARCH WORK

The research work under the programme would, in general, be undertaken by the mining research establishments in the Community. These institutes have, for the most part, already undertaken Community sponsored research as well as being employed regularly on nationally sponsored work. To enable effective use of resources and the programme to be satisfactorily accomplished, research should be allocated in the way best suited to the facilities and general research direction of the various institutes.

VI. PROCEDURES

After acceptance, previous programmes have been controlled in a manner which has proved generally satisfactory. Three advisory committees, a research committee, the committee of producers and workers on industrial safety and medicine and the committee of government experts, composed of members having the relevant expertise, offer pertinent advice to the Commission when projects are being considered for financial aid.

On acceptance of a project by the Commission it is controlled by a contract, binding the beneficiary and the Commission, which details requirements including the provision of technical reports relating to the research. These are examined and discussed by relevant groups of experts who meet and offer pertinent advice to the Commission. On occasions, as necessary, these groups meet at the various research centres or mines where research is being done so that they can examine and evaluate at first hand the research on which they advise.

It is proposed that a new programme would be controlled in this way.

VII. RESEARCH RESULTS

Details of research and results achieved should be made known to all interested parties. By the procedures described above the research reports are made known to members of the groups of experts without delay. The experts are all drawn from the mining industries of the Community countries so that research results are made known to these industries.

For wider dissemination of information on the research undertaken précised details of research accorded financial aid are contained in *Euro Abstracts* and précised final reports on projects are included as they become available together with any patents arising from the research. In addition any person or body requiring a complete final report may have it on request.

During the life of a programme a report detailing projects and progress is also published and distributed.

Methods to improve dissemination of information are always being sought but it is thought that the system described should operate satisfactorily and this will be used for any new programme. Improvements within the framework will continue to be sought to try to make information on the research as widely known as possible.

The Mines Safety and Health Commission operates in the field of safety and health by way of exchange of experiences between the Member States. The Commission's mandate enables it to propose research and from available information make proposals relating to health and safety in mines. The results of all pertinent research are brought to the notice of the Commission.

VIII. FINANCIAL ASPECTS AND DURATION OF PROGRAMME

Previous programmes, in the fields of both health and safety, have been of five years' duration. This period has proved of sufficient duration to enable tangible findings to emerge from research and not too long from the point of application of results to the practical situation. In general projects have been of two and sometimes three years' duration and this too would be applied within the concept of an overall programme duration of five years, this being the proposed duration.

In arriving at a costing for a programme, including financial aid and subsidiary expenses associated with running the programme and disseminating results, extending over the next five years, due account has been taken of the costs of research previously undertaken, the pattern of rising costs, the annual budget allocated for research of a social nature in the coal and steel sector and the staffing available and needed to adequately administer such a programme.

Taking into account these factors, and that aid accorded by the Community can be a maximum of 75 % of the total costs of a project, the beneficiary financing the remainder, it is considered that, to give a satisfactory programme which would contribute substantially towards improved environmental conditions in mines, a total financial aid of 7 000 000 European units of account over the period of five years, commencing in 1977, would be necessary.

IX. CONCLUSIONS

Considering the need to promote research relating to industrial hygiene in mines;

Taking account of the favourable opinions and expressed agreement, as well as their views on research, of the professional, governmental and scientific consultative committees consulted;

Considering Article 55 of the European Coal and Steel Community Treaty,

The Commission of the European Communities decides:

to assign 7 000 000 European units of account for a period of five years commencing in 1977 for a research programme 'Industrial hygiene in mines'.

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 29 June 1978

on an action programme of the European Communities on safety and health at work

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaties establishing the European Communities,

Having regard to the draft resolution submitted by the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council resolution of 21 January 1974 concerning a social action programme (3) provides for the establishment of an action programme on safety and health at work;

Whereas, under Article 2 of the Treaty establishing the European Economic Community, the Community shall have among its tasks, by establishing a common market and progressively approximating the economic policies of Member States, that of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas at the Conference held in Paris in October 1972 the Heads of State or of Government affirmed that the first aim of economic expansion, which is not an end in itself, should be to enable disparities in living conditions to be reduced and that it should result in an improvement in the quality of life as well as in standards of living;

Whereas moreover, in Article 117 of the said Treaty, the Member States agree upon the need to promote improved working conditions and an improved standard of living for workers, so as to make possible their harmonization while the improvement is being maintained;

Whereas prevention of occupational accidents and diseases and also occupational hygiene fall within the fields and objectives referred to in Article 118 of the said Treaty; whereas in this context collaboration should be strengthened between the Member States and the Commission and between the Member States themselves;

Whereas suitable health protection for the public and effective prevention of accidents at work and occupational diseases would meet these general objectives;

Whereas in spite of sustained efforts the continuing high level of accidents at work and of occupational diseases remains a serious problem;

Whereas efforts made in the field of accident prevention and health protection at the work place have beneficial effects which are reflected in the economic sphere and in industrial relations;

Whereas a considerable effort is needed at Community level to search for and implement

(1) Opinion delivered on 12 June 1978 (not yet published in the Official Journal).

(2) Opinion delivered on 21 June 1978 (not yet published in the Official Journal).

(3) OJ No C 13, 12. 2. 1974, p. 1.

suitable means for maintaining or creating a working environment tailored to the needs of man and his legitimate aspirations;

Whereas both the effectiveness of the measures and their cost should be taken into account in the choice of action at Community level to be undertaken and of the measures to be taken to implement it;

Whereas the improvement of working conditions and the working environment must be envisaged in overall terms and must concern all sectors of the economy;

Whereas the actions should be implemented in accordance with the provisions of the Treaties, including those of Article 235 of the Treaty establishing the European Economic Community;

Whereas it is essential also to encourage the increasing participation of management and labour in the decisions and initiatives in the field of safety, hygiene and health protection at work at all levels, particularly at the level of the undertaking;

Whereas the Advisory Committee on Safety, Hygiene and Health Protection at Work, set up by Council Decision 74/325/EEC of 27 June 1974 [1], must be closely associated with this work;

Whereas the European Foundation for the Improvement of Living and Working Conditions and the European Centre for the Development of Vocational Training may have a role to play in the implementation of certain aspects of the programme;

Whereas, in implementing the actions, account must be taken of work undertaken in other fields, notably in the context of the Council resolution of 17 December 1973 on industrial policy [2] and of the Declaration of the Council of the European Communities and of the representatives of the Governments of the Member States meeting in the Council of 22 November 1973 on the programme of action of the European Communities on the environment [3], in order to ensure the closest possible coordination of actions and proposals;

Whereas, in order to carry out the actions, it is important to ensure that concepts, terminology and also methods of identification, measurement and assessment relating to safety and health risks are harmonized; whereas such a task is of major importance in the context of these actions;

Notes the action programme from the Commission annexed hereto and approves its general objective, which is to increase protection of workers against occupational risks of all kinds by improving the means and conditions of work, knowledge and human attitudes;

Expresses the political will to take, in keeping with the urgency of the matter and bearing in mind what is feasible at national and Community level, the measures required so that between now and the end of 1982 the following actions in particular can be undertaken:

Accident and disease aetiology connected with work — Research

1. Establish, in collaboration with the Statistical Office of the European Communities, a common statistical methodology in order to assess with sufficient accuracy the frequency, gravity and causes of accidents at work, and also the mortality, sickness and absenteeism rates in the case of diseases connected with work.

2. Promote the exchange of knowledge, establish the conditions for close cooperation between research institutes and identify the subjects for research to be worked on jointly.

Protection against dangerous substances

3. Standardize the terminology and concepts relating to exposure limits for toxic substances.

   Harmonize the exposure limits for a certain number of substances, taking into account the exposure limits already in existence.

4. Develop a preventive and protective action for substances recognized as being carcinogenic, by fixing exposure limits, sampling requirements and measuring methods, and satisfactory conditions of hygiene at the work place, and by specifying prohibitions where necessary.

5. Establish, for certain specific toxic substances such as asbestos, arsenic, cadmium, lead and chlorinated solvents, exposure limits, limit values for human biological indicators, sampling requirements and measuring methods, and satisfactory conditions of hygiene at the work place.

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[1] OJ No L 185, 9. 7. 1974, p. 15.
[2] OJ No C 117, 31. 12. 1973, p. 1.
[3] OJ No C 112, 20. 12. 1973, p. 1.

6. Establish a common methodology for the assessment of the health risks connected with the physical, chemical and biological agents present at the work place, in particular by research into criteria of harmfulness and by determining the reference values from which to obtain exposure limits.

7. Establish information notices on the risks relating to and handbooks on the handling of a certain number of dangerous substances such as pesticides, herbicides, carcinogenic substances, asbestos, arsenic, lead, mercury, cadmium and chlorinated solvents.

Prevention of the dangers and harmful effects of machines

8. Establish the limit levels for noise and vibrations at the work place and determine practical ways and means of protecting workers and reducing sound levels at places of work.

   Establish the permissible sound levels of building-site equipment and other machines.

9. Undertake a joint study of the application of the principles of accident prevention and of ergonomics in the design, construction and utilization of the plant and machinery, and promote this application in certain pilot sectors, including agriculture.

10. Analyse the provisions and measures governing the monitoring of the effectiveness of safety and protection arrangements and organize an exchange of experience in this field.

Monitoring and inspection — improvement of human attitudes

11. Develop a common methodology for monitoring both pollutant concentrations and the measurement of environmental conditions at places of work; carry out intercomparison programmes and establish reference methods for the determination of the most important pollutants.

    Promote new monitoring and measuring methods for the assessment of individual exposure, in particular through the application of sensitive biological indicators. Special attention will be given to the monitoring of exposure in the case of women, especially of expectant mothers, and adolescents.

    Undertake a joint study of the principles and methods of application of industrial medicine with a view to promoting better protection of workers' health.

12. Establish the principles and criteria applicable to the special monitoring relating to assistance or rescue teams in the event of accident or disaster, maintenance and repair teams and the isolated worker.

13. Exchange experience concerning the principles and methods of organization of inspection by public authorities in the fields of safety, hygiene at work and occupational medicine.

14. Draw up outline schemes at a Community level for introducing and providing information on safety and hygiene matters at the work place to particular categories of workers such as migrant workers, newly recruited workers and workers who have changed jobs.

Notes that the Commission will take the necessary initiatives for the implementation of this resolution;

Invites the Commission to submit an annual report to it on the progress made in implementing this resolution.

ANNEX

ACTION PROGRAMME OF THE EUROPEAN COMMUNITIES ON HEALTH AND SAFETY AT WORK

Introduction

A high percentage of the population of the nine Member States is exposed to varying degrees of many and widely divergent occupational risks which could threaten their health and personal safety. Occupational pathology is habitually concerned with accidents and diseases resulting from work, the prevention or diagnosis of which have been the subject of action within the Community for several years, and the harmful effects of which are partly or totally compensated through various schemes.

Despite the efforts made in the Member States of the Community, the number of accidents and diseases resulting from work remains high. Quite apart from their financial importance, the human and social consequences of occupational accidents and diseases are incalculable, since it is not easy to assess the psychological damage done or to take into account the long-term factors connected with accidents and disease. Thus there is good reason to believe that the total social and financial cost of occupational accidents and diseases is far greater than the quantitative estimates at our disposal suggest.

Modern technology uses increasingly advanced processes which present new dangers. They produce or use chemical substances which are inadequately tested for their harmful effects on man. All chemical, physical, mechanical and biological agents and the psychosocial factors connected with work must be readily recognizable and brought under control or eliminated by suitable means so as to avoid any damage to health or a significant reduction in safety.

The prevention, limitation and, where possible, elimination of occupational risks constitute major elements of a policy to protect the health and safety of the workers.

Of course, the Member States have a long tradition in the organization of industrial safety and health but they must also agree to shoulder a joint programme of positive and effective actions to improve the conditions under which man performs his job and do everything possible to ensure his well-being and guarantee the quality of his working environment. In order to implement such a programme, it is necessary not only to harmonize ideas and basic principles, but also to plan and guide technical progress and the organization of work in such a way as to take account of the requirement of health and safety.

In view of the persisting gravity of the problem, the Commission must initiate, promote and develop a common preventive policy with regard to all occupational risks, especially by obtaining fresh knowledge, by encouraging cooperation and coordination and by developing appropriate actions at different levels of responsibility or competence. In addition to promoting exchanges and the improvement of reciprocal information, such a programme should aim to persuade responsible authorities in the Member States and the social partners to join forces against risks of all kinds which the work environment brings to bear on the health and safety of workers and on society at large.

The present programme takes account of the guidelines proposed by the Commission and of several studies made and consultations held over the past two years. It also takes into consideration the experience gained by the Commission in the coal and steel industries and the nuclear field where, under the terms of the ECSC and Euratom Treaties, research programmes and work on harmonization and standardization in accident and disease prevention and protection with regard to specific risks in these three sectors have been carried out for many years.

This programme does not effect other programmes such as those for the elimination of technical barriers to trade and for the protection of the environment. In proposing specific actions within the framework of this programme, the work undertaken by other research programmes, notably in the environmental field will be taken into account, so that maximum coordination is ensured.

Some action could be taken in collaboration or conjunction with other organizations, such as the European Foundation for the Improvement of Living and Working Conditions and the European Centre for the Development of Vocational Training.

I. General objectives of the action programme on safety and health

The main aim of the programme is to increase the level of protection against occupational risks of all types by increasing the efficiency of measures for preventing, monitoring and controlling these risks.

One of the primary conditions for the implementation of such a programme is the full participation of both sides of industry in preventive and protective measures.

Each of the actions proposed in the programme must be seen as an element contributing to the better organization of preventive and protective measures for workers and to closer collaboration between the social partners towards that end. Furthermore, in order to take account of the experience obtained by international organizations and to avoid duplication of effort in the surveys or actions undertaken, liaison between Member States must be improved with a view to organizing joint action in international agencies responsible for occupational health and safety.

Such a programme should make it possible to achieve the following general objectives:

(a) Improvement of the working situation with a view to increased safety and with due regard to health requirements in the organization of the work. Such an improvement should cover not only the existing situation but also new technical developments. Technical progress which contributes to the creation of a new working situation or to the improvement of an existing situation is not always conceived and directed in line with the dictates of safety and health; where machinery, premises and plant are concerned, safety aspects should be considered at the design stage and integrated into the subsequent stages of their production and commissioning. Due attention must also be paid to health considerations at every stage in the production and use of chemical substances.

There is a close link between occupational accident and disease prevention on the one hand, and the organization of work and safety and health training and information at the place of work on the other. There is an urgent need to review and redefine a more effective accident and disease prevention strategy in order to up-date traditional methods.

Where is it not possible to eliminate it, exposure to occupational risks must be kept to permissible levels applicable to all workers within the Community and based on common concepts and references.

So as to monitor more effectively the application of preventive measures, surveillance of health and working conditions must be intensified, notably in line with the exigencies of occupational medicine, hygiene and safety appropriate to present-day conditions.

(b) Improvement of knowledge in order to identify and assess risks and perfect prevention and control methods.

In view of the complexity and diversity of the factors it embraces, aetiology is a priority subject for research and analysis. Valid and comparable statistics must be prepared and existing research coordinated. The promotion of new research is an essential corollary to any Community action in occupational medicine, hygiene and safety.

(c) Improvement of human attitudes in order to promote and develop safety and health consciousness.

Alongside the technical aspects of accident prevention and health protection, a real system of safety instruction and health education must be created. This has yet to be introduced and will be taught in different ways at the various educational levels and at the various levels of responsibility and action within undertakings.

II. Description of the initiatives to be taken at Community level

Attainment of the general objectives requires many initiatives involving various scientific disciplines. Such initiatives presuppose the effective participation of individuals in managing their own health and safety and should encourage the social partners and the various professional associations and bodies to take a more active part in the formulation and implementation of a policy for the prevention of dangers at the workplace.

The following six concrete initiatives are planned within various time limits for the attainments of these general objectives:

1. incorporation of safety aspects into the various stages of design, production and operation;

2. determination of exposure limits for workers with regard to pollution and harmful substances present or likely to be present at the workplace;

3. more extensive monitoring of workers' safety and health;

4. accident and disease aetiology and assessment of the risks connected with work;

5. coordination and promotion of research on occupational safety and health;

6. development of safety and health consciousness by education and training.

INITIATIVE 1

Incorporation of safety aspects into the various stages of design, production and operation

Aim

In order to promote this incorporation the Commission will consider actions aimed essentially at harmonizing, from the safety point of view, the principles and designs of workplaces, machinery, equipment and plant and at the formulation or coordination of rules for their use and guidance on the use of dangerous substances.

The principle of integrated safety is today generally regarded as essential for all preventive measures and it is receiving increasing attention at national and international level. In all decisions with regard to undertakings (planning and construction of the undertaking, purchase and operation of plant, organization of production, working methods, etc.) more attention must be paid to safety. Similarly operational safety should be studied in advance for the design and manufacture of machinery and tools so as to guarantee protection of the worker's health as far as possible. As concerns the production and distribution of dangerous substances, the same principles have to be taken into account.

The principles of ergonomics are not yet sufficiently well applied in the search for better safety. In particular design ergonomics which is already widespread in the Community has not been sufficiently adopted, as compared with the work carried out in the Scandinavian countries and in the United States.

The results of research carried out over several years in the coal and steel industries indicate the measures which should be planned at Community level in other sectors of industry.

In this field the Commission is planning to propose a certain number of measures which will encourage the application of the principles and which could progressively form a basis of legal, regulatory and administrative provisions or of up-to-date technical guides drawn up at Community level in order to improve the current situation in many industrial or agricultural spheres. These measures concern in particular:

(a) *Setting up of undertakings and planning of layout and equipment*

The Commission has selected the following points from amongst the numerous factors which must be taken into consideration: ventilation and lighting, temperature, protection against falling from heights and against falling heavy objects, protection against fire, noise and vibrations, gases, vapours and dusts, design of general and emergency thoroughfares and location of doors and windows.

(b) *Organization of work within undertakings or between several undertakings*

The following points are to receive special attention: equipment and layout of workplaces, outdoor workplaces, warning signs, dangerous jobs, no-access and limited access areas, transport within the undertaking, inspections, maintenance work, plant testing, coordination of work within the undertaking, coordination of the work of various departments belonging to the same undertaking or to different undertakings, etc.

(c) *Manufacture and use of machinery, equipment and tools*

This is the chief area for the application of technical accident and disease prevention which is of paramount social and economic importance. In this sector harmonization measures require lengthy preparation. With regard to the manufacture of machinery and equipment the concept of their safety was already considered in the general programme of 28 May 1969 on the elimination of technical barriers to trade (1). However, there exist inherent dangers in the use of machinery and equipment and a procedure should be introduced for the exchange of experience and information so that such dangers are recognized and identified. Furthermore, since 1969 the Council had already pointed out that it would be possible, if necessary, to lay down rules on use supplementing Community Directives on harmonization with regard to the manufacture of machinery and equipment. Guidelines and rules must be drawn up with a view to determining appropriate legislation at Community level.

(d) *Handling of dangerous substances and preparations*

In this field Community harmonization action must be taken with regard to the handling of dangerous substances and preparations, with a view to improving the practical organization of safety, that is, handling at the workplace, storage, marking of containers and pipes. Technical and health protection measures, working restrictions and prohibitions, the number of hours worked and medical protection measures should also be harmonized at Community level. The

(1) OJ No C 76, 17. 6. 1969.

distribution of dangerous substances (classification, identification and packaging) is taken into account in the programmes for the 'elimination of the technical barriers to trade' and 'environment'.

Contents

Some of the objectives set out above can be achieved only in the medium and long-term. The problems will be selected for study on the basis of the wishes expressed or guidance given by relevant bodies who should above all bear in mind practical considerations and on the basis of urgent needs which may arise from unforeseen dangerous situations such as accidents or disasters, or which may be recognized as a result of the acquisition of fresh knowledge on the effects of chemical substances and the need to control their use with a view to protecting health.

The Commission plans to begin work in this field by studying the following matters:

(a) *Setting up of undertakings and planning of layout and equipment*

1. Organization and layout of agricultural holdings. There is reason to consider that modern agricultural holdings should meet requirements similar to those imposed upon industrial enterprises. So far these requirements have generally not been taken into account in national regulations and it would be appropriate to take the necessary steps at Community level.

2. Noise and vibration control. This requires special medium and long-term attention. The main task consists in setting an optimum machine-noise level on the basis of health data and an assessment of results obtained to date by research and the examination of practical experiments (for example the use of machinery with a low-noise level, which has already been perfected). Noise emission levels, designed to take account especially of the practical problems involved in occupational protection, will be established after national experts have been consulted and will be published in the form of Directives.

(b) *Organization of work within undertakings*

1. Transport within undertakings. Internal transport, particularly the safe organization of general thoroughfares, needs to be examined and suitable practical instructions should be drawn up. This sector has a particularly high accident rate.

2. Safety signs at workplaces. Council Directive 77/576/EEC of 25 July 1977 on safety signs at workplaces provides that these signs must be able to keep up with technical progress and meet recommendations for harmonization at international level.

In this connection provision is made for a committee to meet at regular intervals. This action was initiated in 1977 and will be continued in 1978 and 1979 by means of proposals for Directives.

3. Coordination of the work of principal and secondary undertakings. The internal and external collaboration of principal and secondary undertakings (subcontracts) requires special technical examination from the point of view of safety. In practice — especially for the coordination of collaboration between several independent undertakings — there are many problems still to be solved. A Community examination of these questions leading to such coordination by means of suitable legal instruments is required.

(c) *Manufacture and use of machinery, equipment and tools*

In addition to the work completed within the context of the elimination of technical barriers to trade which is concerned with the design and manufacture of machines, equipment and tools it seems essential to examine in the short and medium-term the need for joint rules on the use of the following: agricultural machinery, lifting gear, machinery used in construction, metal scaffolding and woodworking machines. Depending on the circumstances and on the results of the collaboration to be organized such rules would take the form of guidelines or Directives.

(d) *Handling of dangerous substances and preparations*

An urgent study must be made of the handling of dangerous or toxic substances and agreement reached on common standards which will then be proposed to the Member States. An essentially practical approach is required and attention will initially be directed towards the problems of health protection connected with the use of pesticides and herbicides in agriculture. Similar problems arise with other products, e.g., arsenic, lead, mercury, cadmium, chrome, nickel, vegetable dusts, biological pollution, etc.

As information is obtained on the toxicological effect of these substances, as outlined in paragraph 5 of Initiative 2, practical guidelines will be drawn up for all products which involve handling problems or health risks.

INITIATIVE 2

Determination of exposure limits for workers with regard to pollutants and harmful substances present or likely to be present at the workplace

Aim

With a view to the organization of disease prevention and to the monitoring of many occupational risks it is

essential to have data on exposure limits for workers with regard to pollutants and harmful substances. It is therefore important for the Commission to achieve, at Community level, harmonization of the concepts, methodologies and references on the basis of which the Member States determine their permissible exposure limits.

There are already standards for protection against radiation at Community level which have been in force since 1959 (Directive) and which were recently revised by a Directive issued in June 1976. They are an example of a joint health policy concerned with an industrial risk facing workers and the general public and based on uniform standards for the whole Community. This example should be extended to other pollutants present at the workplace.

Moreover the studies carried out by the Commission over the past four years in particular in relation to the environment programme and the experience acquired with regard to certain environmental pollutants now make it possible to present concrete proposals for action with regard to certain specific pollutants affecting workplaces in particular.

In addition to these short-term actions, however, the Commission plans to make an objective analysis at Community level of the harmful or undesirable effects of exposure to pollutants in given circumstances — taking account of the results already obtained at international level, in particular by the WHO and the ILO. From this analysis it is proposed to deduce criteria of noxiousness on which to base acceptable exposure limits for workers. Such a project would cover a large number of substances and would be extended as industrial toxicity studies currently in progress are completed.

The protection of human health against chemical substances requires a complex toxicological evaluation which at present is incomplete. The Commission must take priority action with regard to carcinogens, since it is generally accepted that a high proportion of human cancer is caused by external factors including chemicals present at the workplace.

Contents

The Commission is planning the following initiatives:

1. *Non-ionizing radiation and other physical agents*

With regard to non-ionizing radiation, proposals for Directives will be submitted to the Council on microwaves, laser radiation, ultra-violet radiation and ultrasound, on the basis of the procedure followed for standards in protection against radiation.

2. *Harmonization of exposure limits*

The Commission plans, at the earliest possible opportunity, to make a comparative study of existing regulations and recommendations in Member States with regard to permissible exposure levels of workers to toxic substances or physically harmful substances.

The values adopted in different countries vary, the terminology used is not the same and the concepts used to determine the limits are not based on the same principles. Harmonization is therefore essential and a general Directive coordinating and harmonizing exposure levels, possibly updated later on in accordance with the latest scientific data and international information available to the Commission, could be prepared between now and 1979.

This short-term initiative would have the advantage of achieving harmonization at Community level and avoiding the delay of waiting for the completion of on-going research projects in the field of occupational toxicology, whether within the Commission or in the Member States.

3. *Directives on specific pollutants*

The general harmonization discussed in paragraph 2 must be supplemented by the preparation of specific Directives such as those proposed by the Commission for vinyl chloride monomer and those shortly to be put forward on asbestos, lead, mercury, solvents, carbon monoxide, noise and vibrations. The studies in progress within the Commission and the state of knowledge have now reached the stage where they can be used to determine the permissible exposure levels for the abovementioned pollutants from the point of view of health protection.

4. *Carcinogens*

Specific Commission action with regard to carcinogens present at workplaces will consist in:

— collecting data on the distribution of carcinogens and their concentration at the workplace,

— collecting and analysing medical data,

— perfecting readily applicable detection,

— fixing the lowest possible levels or, if necessary, prohibit a certain number of carcinogens present at the workplace.

5. *Toxicological evaluation*

Toxicological evaluation is central to the assessment of the health risks due to the presence of many chemical and biological agents in the working environment. This can be carried out only if sufficient knowledge is available on the effects of the agents under

consideration on man. The methodology adopted by the Commission for assessing the dangers from environmental pollutants in general is based on research into criteria for noxiousness from which permissible human exposure levels may be deduced. The data already collected by the Commission on the effects on health of urban atmospheric pollutants and certain water pollutants provide a basis for the action planned in industry, but it needs to be considerably extended and developed. Priority will be given to the following substances: arsenic, cadmium, chromium, iron oxides, nickel, vegetable dusts, ozone, nitrogen oxides and biological pollutants.

The Commission, while taking account of studies already carried out and projects being planned at international level, is to give priority to the extension and development of information relating to the objective evaluation of risks associated with toxic substances present at the workplace. This action will lead to Directives on exposure levels for workers and also to the compilation of handbooks on the safe handling of such substances at the workplace. The Commission intends to carry out this action by means of a series of studies and scientific and technical consultations. It will be assisted in this action by a Scientific Committee on Toxicology planned for the end of 1977.

INITIATIVE 3

More extensive monitoring of workers' safety and health

Aim

Whereas exposure limits for workers and safety and health protection measures are essential factors in the organization of accident and disease prevention, various permanent and well-adapted methods are also required with which to monitor the measures adopted and the exposure levels prescribed for the workplace.

These monitoring methods must be harmonized and coordinated at Community level.

The monitoring of workers' health and safety depends upon several types of monitoring which complement each other:

(a) monitoring of the effectiveness of individual or group safety and protection measures with regard to machinery, equipment and plant;

(b) monitoring of hygiene and working conditions from which the types of exposure to different physical, chemical and biological agents present in the working environment are derived;

(c) monitoring of the state of health and behaviour of the worker as part of occupational medicine;

(d) special monitoring as a result of work entailing special risks;

(e) industrial toxico-vigilance;

(f) inspections.

The Commission feels that it is essential to harmonize at Community level principles and methods applicable to monitoring. Moreover, efforts should be made to interest workers in monitoring within the undertaking, either by direct means or by means of existing bodies or institutions.

Any proposed solutions must allow workers' and employers' representatives to play a fuller part in the practical organization of such monitoring at various levels of action and responsibility.

Contents

1. *Monitoring of the effectiveness of safety and protection measures*

Planning and execution of this form of monitoring varies at present from country to country and according to the regulations and activities concerned. Once the provisions currently governing such monitoring have been analysed, suitable proposals will be submitted to the Council for adoption in order to harmonize and strengthen the organization of this type of monitoring in which the workers' and employers' representatives should play a greater role.

2. *Monitoring of hygiene and working conditions*

Monitoring of pollutant concentrations at workplaces and the intensity of environmental factors is essential for the organization of disease prevention and monitoring.

Measuring programmes do exist in Member States but they are based on different methods and sometimes different principles. These measures must be harmonized at Community level with regard to sampling, techniques and measuring intervals.

When the Commission has analysed these different methods, it will draw up intercomparison programmes and prepare reference methods for the determination of the major pollutants present at workplaces.

Special attention will be paid to promoting the development of new monitoring and measuring methods for individual exposure.

The Commission will make a similar effort to apply the human biological indicators already in existence and will carry out research for new indicators which will make it possible to detect any changes in the state of health at an early stage. The European list of occupational diseases will be used as a reference document for drawing up the priorities for this action scheduled to take place as from 1978. Account will have to be taken not only of individual sensitivity, which may be very high for some pollutants, and of workplaces so that groups with a high occupational exposure risk may be identified, but also of some special groups of workers such as adolescents and women.

3. *Monitoring of workers' health*

In accordance with the terms of Article 118 of the Treaty establishing the EEC, occupational medicine must be considered as an area in which the Commission has the task of promoting close cooperation between Member States in the social field, particularly in matters relating to working conditions and to the prevention of occupational accidents and diseases. The term 'occupational medicine', as stated in the 1962 recommendation on occupational medicine in the undertaking, refers to a service established in or near a place of employment for the purposes of:

(a) protecting the workers against any health hazard which may arise out of their work or conditions in which it is carried on;

(b) contributing towards the workers' physical and mental adjustment, in particular by the adaptation of the work to the workers and their assignment to jobs for which they are suited; and

(c) contributing to the establishment and maintenance of the highest possible degree of physical and mental well-being of the workers.

In addition, Recommendation 112 of the ILO stated that the role of occupational health services should be essentially preventive and defined their functions so as to include the prevention of accidents and occupational diseases, the rehabilitation of workers, job analysis in the light of physiological and psychological considerations, surveillance of hygiene, advice on the placement of workers, medical supervision, emergency treatment and research in occupational health.

Consideration must be given to closer harmonization of the methods used by occupational health services in undertakings in order that the work of the industrial medical officer may be more fully integrated into the system for monitoring workers' safety and health, as recommended in this programme.

This revision will be carried out with effect from 1978 by consultation with the relevant bodies and should culminate in a directive on the organization of occupational medicine in the Member States of the Community, to be proposed in 1979.

4. *Special monitoring*

In many undertakings there are some jobs which present higher than average risks; certain types of casual work may also involve exposure to risk which is higher than that present in normal working conditions or than the exposure levels laid down. Such jobs are done, for example, by members of rescue teams or of maintenance and repair teams and by workers in virology laboratories and in institutes producing sera or viruses, etc.

Exchanges of information and experience for cases involving these aspects should be organized at Community level and should lead to a definition of the principles and criteria for this particular type of monitoring.

5. *Industrial toxico-vigilance*

The Commission plans to set up an industrial toxico-vigilance system along the lines proposed by the ILO and which is aimed at establishing a central information system for all observations made in industrial activity concerning the harmful effects of toxic substances. This system should be based on a network of highly specialized centres which could analyse information received from occupational health services and transmit it when required to interested persons or institutions.

The Commission will make an appropriate proposal to the Council, after holding the necessary consultations.

6. *Inspections*

Inspections carried out for the purposes of occupational safety, medicine and hygiene should be organized so that they assume full responsibility and control by placing the emphasis on preventive measures. With this end in view the necessary provisions must be made in close collaboration with the competent authorities in Member States for the strengthening and development of the work of inspection at national level. The Commission intends to review the role of the inspectorate responsible for implementing in each Member State the regulations of occupational health, hygiene and safety. This review will cover diplomas, certificates and other qualifications, and the powers and scope of their responsibilities in this field.

INITIATIVE 4

Accident and disease aetiology and assessment of risks connected with work

Aim

The risk of accident or disease may be estimated objectively only if reliable methods are available which make it possible to determine the scope, seriousness and development in time and, in a general way, to acquire greater knowledge of the various factors involved in the cause of accidents at work and of diseases due to work.

Statistics are essential tools for the analysis and interpretation of facts and for assessment of the results obtained from an accident and disease prevention policy.

The improvement of statistics and their comparability, the harmonization of methodologies and the more precise interpretation of the data they provide are important steps in the development of an improved organization of work with regard to accident and disease prevention. Since so many different approaches are used a distinction must be drawn between action in respect of accidents at work and action in respect of disease due to work.

Such actions must provide a clearer picture of the different causative factors of accidents at work and of diseases due to work and must use them as a basis for practical preventive and protective measures against hazards connected with work. It will then be possible to provide preventive-type protection for men at work, on an objective and realistic basis.

In addition, special attention will be paid to calculating the economic and social cost of accidents at work and diseases due to work so as to establish the order of priority for preventive measures.

Account will be taken of the harmonization work already carried out by other international organizations and of work completed or in progress, particularly by the ILO.

Contents

These initiatives deal separately with accidents at work and diseases resulting from work.

As regards accidents at work the two sectors for which Community statistics are already available are the iron and steel industry and mining. Drawing on the experience gained in the sectors the Commission plans to draw up Community statistics concerning other sectors, to launch sectoral in-depth studies and to harmonize accident definitions and methods of reporting accidents in order to establish more precisely the aetiology of accidents. Preparatory surveys are in progress and the first results will be available in 1979.

With regard to diseases due to work, statistics collected at national level usually concern only occupational diseases and are drawn up on different bases so that it is not possible to compare them. There are no Community statistics in this field and it would be appropriate to devise a joint methodology as soon as possible so that existing national statistics may be processed. The Commission therefore plans to gather and analyse national statistical information and to draw up proposals for methodologies with a view to a common approach, so that calculations may be made of mortality, sickness and absenteeism rates and their evolution over a period of time.

Close collaboration must be instituted with the national statistical offices and the national social security offices with regard to these new problems.

This is a medium-term initiative and the first results will become available only after two or three years.

INITIATIVE 5

Coordination and promotion of research on occupational safety and health

Aim

The action planned in the programme must find its scientific support in a research programme which is coordinated and/or carried out jointly and which deals on the one hand with the measurement and effects on health of pollutants and harmful substances and, on the other hand, with the development within undertakings of safer, 'cleaner' technologies which do not threaten the general environment.

Collaboration must be organized and strengthened between the institutes and laboratories of Member States in order to avoid duplication of work, to derive greater benefit from the financial resources available and where necessary to bring together highly specialized laboratories to work on problems which cannot be solved in a single Member State.

Moreover, research must be carried out in fields where little or no work has been done, such as agriculture and the tertiary industries.

Contents

Two permanent inventories of research in progress or planned (occupational safety and medicine) at national level are already being prepared at Community level. From 1978 the inventories will make it possible to set up a reciprocal information system on responsible bodies in order to promote the exchange of knowledge and create conditions for close collaboration between research institutes. These permanent inventories will also mention fields in which there are gaps. Three pilot studies are in progress on inflammable substances, occupational risks in the building industry and certain carcinogens. During 1978 these studies will also indicate which subjects should be covered by joint research.

On the basis of these inventories the data bank being compiled within the Commission should be progressively supplemented and should include details of new research; account is taken of the fact that this data bank will subsequently be linked to the information system on medical research which is being set up at Commission level.

Research work aimed at closing the gaps in knowledge on toxic agents and their effects on health or at improving methods for measuring these agents is of major importance for the success of several parts of the programme — in particular the section on the determination of criteria for harmfulness. It will also help to determine as accurately as possible the potential and actual effect on health of pollutants and nuisances present or likely to be present at the workplace.

The results of the implementation of the various initiatives making up the programme will be analysed by the Commission with effect from 1979 and could form a basis for the preparation of a detailed and precise Community research and development programme which could be the subject of a future Commission proposal for adoption by the Council.

INITIATIVE 6

Development of safety and health consciousness by means of education and training

Aim

This initiative is aimed at developing safety and health consciousness by means of education and training. It is of paramount importance for the success of the promotion of safety and hygiene at workplaces. It is based on instruction and training and involves various levels of education and the undertaking itself. It also concerns in a general way occupational and social sectors involved in problems of accident prevention and health protection at work.

This is a medium and long-term initiative in view of the different sectors involved and of the absence to date of any real methodology and common principles. Various studies and consultations will be required before results and concrete proposals are obtained at Community level.

This action concerns educational bodies, undertakings and society in general.

As for education the basic principles of safety and of health education must be taught in schools. Knowledge of and the correct attitudes towards occupational safety and hygiene must be taught at various levels of education as an integral part of the curriculum and at the same time attention must be paid to the requirements of prevention in relation to real life situations. The question is one of establishing at Community level a safety training scheme which takes account of the differences between national characteristics and traditions but which is based on common principles and a common approach.

Within undertakings steps for the elimination of risks must be systematically organized and coordinated at all levels of responsibility and management. Principles of safety must be consolidated, developed and made public. Action designed to sharpen the awareness of industrialists and heads of undertakings must be taken together with the campaign aimed at workers.

For the training of society in general the action taken in education must be supplemented by action aimed at certain population groups. The use of audiovisual aids is one of the most modern and most effective means of informing the public of the importance and significance of accident and disease prevention.

Contents

1. *Education*

The Commission plans to carry out, together with the bodies responsible for national education, preparatory studies for the purpose of defining harmonized planning at Community level.

In general education — starting at the earliest age and continuing throughout school life — instruction must be on two levels:

— theoretical and practical instruction to give children and young people an awareness of the risk of accidents,

— instruction to develop a sense of moral and public responsibility with regard to safety and health protection.

In technical education relevant training in safety and health protection should accompany all levels of technical instruction and vocational training. Special attention should be paid to the training of persons particularly concerned with safety and health protection who have a specific task or responsibility in this field.

The Commission plans to propose Community training models for persons in certain occupations and concerned with specific tasks, such as industrial medical officer, occupational safety officer, engineer, architect, member of a company safety committee or union official.

2. *Undertaking*

Within an undertaking training in safety must be under the control of the undertaking itself since general and technical training cannot take the place of appropriate action at the workplace. This type of training must supplement the instruction received in schools and it must also be given to those who have not previously received any such instruction.

Such training, to be carried out within industry, will be more specialized and more detailed. In many cases it will be organized by specialist bodies whose work must be coordinated at Community level. It should be remembered that education covers a broad span of learning situations — for example instruction given by experienced workers and learning on-the-job.

Beginning in 1978, the Commission intends:

— to draw up Community models for safety training and refresher courses for certain categories of staff: administrative grades, executive grades, instructors for courses on safety and health education and safety delegates,

— to draw up Community models for presenting various aspects of safety to newly recruited workers, migrant workers and workers who have changed jobs,

— to draw up manuals and codes of practice with regard to sectoral activities or dangerous jobs,

— to organize safety campaigns of limited duration with a specific aim, in which workers will feel fully and actively involved,

— to extend the group training courses already in existence to other groups of persons concerned with accident prevention and safety measures.

This action will be furthered by making available to both management and labour knowledge or concepts acquired either by exchange of experience within specialist groups in the relevant sectors or by research projects jointly agreed and financed. Such knowledge could be included in instructions, regulations or codes of practice, to be distributed with commentaries in the appropriate quarters and to be kept constantly up to date.

The Commission will support this type of cooperation and promotion of safety by providing information gathered from specific aspects of the action programme, such as information on accidents and on technical progress in the design, manufacture and use of machinery and plant, and by making available the industrial toxicovigilance results.

3. *Population groups*

In addition to the action taken in education, general information for certain population-groups (such as parents' associations, professional bodies, women's associations) must be organized with regard to the importance of accident and disease prevention. Some steps have already been taken in this field at national level. Audiovisual aids are already used to provide this information. The Commission plans to coordinate these initiatives and develop them jointly, to produce films and set up a permanent file on audiovisual aids available on an exchange basis.

COMMISSION

COMMISSION DECISION

of 29 June 1978

establishing an Advisory Committee on Industrial Research and Development

(78/636/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the guidelines for a common policy in the field of Science and Technology,

Whereas the Commission intends to increase industrial research during the next few years;

Whereas industrial research and development affects working conditions and employment,

HAS DECIDED AS FOLLOWS:

Article 1

1. There is hereby established, and attached to the Commission, an Advisory Committee on Industrial Research and Development, hereinafter referred to as 'the Committee'.

2. The Committee shall be composed of representatives of European organizations competent in the field of industrial research and development.

Article 2

Either at the Commission's request or on its own initiative, the Committee shall provide the Commission with opinions on all problems connected with the following matters:

(a) Aspects of research and development involving relations between the Commission and Community industry which are of a horizontal nature, in particular: the designing of Community policy on industrial research and development; improvement of the exchange of information between industry and the Commission on a reciprocal basis.

(b) Guidelines for the research and development programmes of industrial interest which the Commission might propose to the Council. The Committee shall help to ensure appropriate contacts with Community federations of industry, where such contacts do not already exist.

(c) Research contract projects of industrial interest for which the Commission provides financial assistance [1].

(d) Research and development activity by European industries, useful for defining a common policy in the field of science and technology.

Article 3

1. The Committee shall comprise 25 members.

2. The seats shall be allocated as follows:

15 members of the Union of Industries of the European Community (UNICE) [2], two each for Belgium, France, the Federal Republic of Germany, Italy, the Netherlands and the United Kingdom and one each for Denmark, Ireland and Luxembourg;

four members of the European Centre for Public Enterprise (ECPE) [3];

three members of the Federation of European Industrial Cooperative Research Associations (FEICRO) [4];

three members of the European Trade Union Confederation (ETUC) [5].

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[1] By virtue of the decision to be taken by the Council under the common science and technology policy (see Commission communication to the Council of 30. 6. 1977, OJ No C 187, 5. 8. 1977).

[2] Address: 6, rue de Loxum, 1000 Brussels.

[3] Address: 15, rue de la Charité, 1040 Brussels.

[4] Address: 47, Victoria Street, London SW1H 0EQ.

[5] Address: 37, rue Montagne aux Herbes Potagères, 1000 Brussels.

3. Eight persons belonging to the following organizations may attend the Committee's meetings as observers :

three observers from the European Research and Development Committee (CERD) set up by the Commission on 14 February 1973 ;

one observer from the European Industrial Research Management Association (EIRMA) (1) ;

one observer from the UNICE secretariat ;

one observer from the ECPE secretariat ;

one observer from the FEICRO secretariat ;

one observer from the ETUC secretariat.

Article 4

The members and observers of the Committee shall be appointed by the Commission after consultation with their respective organizations.

Article 5

The term of office of a Committee member and an observer shall be two years. It shall be renewable.

After expiry of the two year period, Committee members and observers shall remain in office until they have been replaced or their term has been renewed.

The appointment of a member or observer shall be terminated before the end of the two year period if such member or observer resigns, ceases to belong to the organization he represents, or dies. The appointment of a member or observer may also be terminated if the organization which proposed him as a candidate requests that he be replaced.

He shall be replaced for the remainder of his term in accordance with the procedure set out in Article 4.

His duties shall not entitle him to remuneration.

Article 6

The list of members and observers shall be published by the Commission for information purposes in the *Official Journal of the European Communities.*

Article 7

After consulting the Commission, the Committee shall elect a chairman and a vice-chairman for a period of two years. Election shall be by a majority of two thirds of the members present.

The chairman shall prepare and organize the work of the Committee.

Article 8

The Committee may invite any person with special qualifications in respect of an item on the agenda to participate in its work as an expert.

Such experts shall participate only in the discussions of the items on account of which they were invited.

Article 9

The Committee may set up working parties.

Article 10

1. The Committee shall meet at Commission headquarters.

2. Representatives of the Commission departments concerned shall take part in meetings of the Committee and of its working parties.

3. The relevant departments of the Commission shall provide secretarial services for the Committee and its working parties.

Article 11

The Commission when requesting an opinion from the Committee may fix a date by which the opinion shall be delivered.

Article 12

Without prejudice to Article 214 of the Treaty, where the Commission informs the members of the Committee that an opinion requested or a question raised touches upon confidential matters, such members shall be under an obligation not to disclose information which has come to their knowledge through the work of the Committee or of its working parties.

In such cases only the members of the Committee and the representatives of the Commission departments concerned shall attend the meetings.

Article 13

This Decision shall enter into force on 29 June 1978.

Done at Brussels, 29 June 1978.

For the Commission

Guido BRUNNER

Member of the Commission

(1) Address : 38, Cours Albert 1e, 75008 Paris.

COUNCIL DECISION

of 25 July 1978

on a research programme of the European Economic Community on forecasting and assessment in the field of science and technology (1978 to 1982)

(78/668/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 2 and 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas research and development activities can play an important part in achieving the long-term objectives of the Community;

Whereas the Council, in its resolution of 14 January 1974 (3), approved an action programme of the European Communities on forecasting, assessment and methodology which is a necessary element for defining the long-term action of the Communities and ensures technical backing for future decisions of Community institutions in the scientific and technological field;

Whereas the ensuing study entitled 'Europe plus 30' stressed the usefulness and need for long-term forecasting activities to guide Community policies and decisions;

Whereas the Council in the said resolution has taken note of the fact that the Commission intends to submit, in the near future, concrete proposals on the basis of the results of the 'Europe plus 30' study;

Whereas rather than creating a Community Forecasting Institute as suggested in the 'Europe plus 30' study, it is preferable that the Community should enlarge its experience during a five-year experimental phase;

Whereas extensive research work is being carried out on forecasting and assessment of technology at a national and international level but is not at the present time sufficiently used by the Community nor specifically tailored to the particular problems facing the Community;

Whereas the Council, in its resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (4), entrusted the Commission and the Council with the task of progressively carrying out this coordination with the assistance of the Scientific and Technical Research Committee (CREST);

Whereas Member States should endeavour, in the framework of the rules and procedures applicable to their national programmes, to coordinate research work carried out by the research bodies and institutes specialized in the field of forecasting and assessment;

Whereas the Commission should be granted the capability of defining priority areas for research and development action of the Community taking into account possible long-term developments and of determining the long-term effects of research and development activities on the social and economic development of the Community;

Whereas CREST has delivered an opinion on the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

The research programme of the European Economic Community on forecasting and assessment in the field of science and technology as defined in the Annex is hereby adopted. The programme shall be for a period of five years.

Article 2

The ceiling for expenditure commitments and the maximum number of staff necessary for the execution

(1) OJ No C 299, 12. 12. 1977, p. 41.
(2) OJ No C 59, 8. 3. 1978, p. 19.
(3) OJ No C 7, 29. 1. 1974, p. 7.
(4) OJ No C 7, 29. 1. 1974, p. 2.

of the programme are set respectively at 4·4 million European units of account, and 10 temporary staff within the meaning of Article 2 (a) of the conditions of employment of other servants of the European Communities, set by Regulation (EEC, Euratom, ECSC) No 259/68 (1), as last amended by Regulation (Euratom, ECSC, EEC) No 914/78 (2). The European unit of account is defined by the current Financial Regulation applicable to the general budget of the European Communities.

Article 3

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by an Advisory Committee on Programme Management to be set up by the Commission, conforming to the Council resolution of 18 July 1977 (3).

Article 4

The Commission shall assess the result of the programme and report to the Council and to the European Parliament at the end of the fourth year.

Article 5

The information resulting from the implementation of the programme shall be disseminated in accordance with Regulation (EEC) No 2380/74 (4).

Article 6

This Decision shall take effect on the day following its publication in the *Official Journal of the European Communities*.

Done at Brussels, 25 July 1978.

For the Council

The President

K. von DOHNANYI

(1) OJ No L 56, 4. 3. 1968, p. 1.
(2) OJ No L 119, 3. 5. 1978, p. 8.
(3) OJ No C 192, 11. 8. 1977, p. 1.
(4) OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

Research programme of the European Economic Community on forecasting and assessment in the field of science and technology

(1978 to 1982)

(Indirect action)

1. The main aim of the research programme is to contribute to the definition of long-term Community research and development objectives and priorities and thus to the development of a coherent science and technology policy in the long term.

2. Work should concentrate on the following three priority areas: long-term supply of resources, long-term technical and structural change, and long-term social change.

3. To achieve the aim referred to in point 1, the programme has three main tasks within the three above priority areas referred to in point 2:

   (a) Analyzing existing forecasting and assessment research activities within the Community and elsewhere with regard to their relevance to the development of the Community's scientific and technological policy.

   (b) Highlighting prospects, problems and potential conflicts likely to affect the long term development of the Community and defining alternative courses of Community research and development action to help solve or achieve them or to render concrete these possibilities. The research is to be specifically problem orientated and geared to the practical needs of the Community institutions and member governments and chosen on the basis of appropriate criteria. This research is not to be only carried out on current or long term problems of Community interest, not being studied in depth elsewhere, or of a multi-sectoral or multi-disciplinary nature, the solution of which contributes to the development of the Community's scientific and technological policy as a whole. Particular attention is also to be paid to adapting and improving forecasting methodology.

   (c) Establishing, in cooperation with Member States, an *ad hoc* system of collaboration between specialized research groups within the Community and so creating a series of Community forecasting networks. The networks must be as flexible and informal as possible, created and adapted to the particular problem under study. The networks must have the dual function of providing an active input into the programme and encouraging coordination through the exchange of information and researchers between participating centres.

COUNCIL DECISION

of 10 October 1978

amending Decision 74/642/Euratom adopting a research and training programme for the European Atomic Energy Community on plutonium recycling in light-water reactors (indirect nuclear projects)

(78/843/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the Council, by Decision 74/642/Euratom (3), adopted a research and training programme for the European Atomic Energy Community on plutonium recycling in light-water reactors (indirect nuclear projects);

Whereas, in view of the current stage reached in the work provided for under the programme, an extension of the programme by one year would enable the best advantage to be obtained from the efforts being made;

Whereas the abovementioned Decision should therefore be amended,

HAS DECIDED AS FOLLOWS:

Article 1

Article 1 of Decision 74/642/Euratom shall be replaced by the following:

'Article 1

A research and training programme on plutonium recycling in light-water reactors, as set out in the Annex hereto, shall be adopted for a period of five years from 1 January 1975.'

Article 2

Article 2 of Decision 74/642/Euratom shall be replaced by the following:

'Article 2

The maximum amount of the expenditure commitments and the staff required for the purpose of implementing this programme shall be fixed at 4·75 million European units of account and three persons respectively, the European unit of account being as defined in the Financial Regulation applicable to the general budget of the European Communities.'

Done at Luxembourg, 10 October 1978.

For the Council

The President

R. OFFERGELD

(1) OJ No C 182, 31. 7. 1978, p. 46.
(2) Opinion delivered on 12 and 13 July 1978 (not yet published in the Official Journal).
(3) OJ No L 349, 28. 12. 1974, p. 61.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 9 October 1978

adopting a second three-year plan of action in the field of scientific and technical information and documentation

(78/887/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas a resolution was adopted by the Council and the representatives of the Member States meeting within the Council on 24 June 1971 with a view to coordinating the action of Member States regarding scientific and technical information and documentation (STID) (3);

Whereas, under Article 2 of the Treaty, the Community shall have as one of its tasks that of promoting throughout the Community the harmonious development of economic activities and a continuous and balanced expansion;

Whereas the proliferation of information systems and their rapid but disparate progress as a result of the competition among both public and private ventures make the establishment of the European network envisaged by the resolution of 24 June 1971 a matter of urgency;

Whereas the results achieved by the initial three-year plan of action in the field of scientific and technical information and documentation, adopted by Decision 75/200/EEC (4), justify the setting up of this network which should effectively contribute to the achievement of the abovementioned objectives of the Treaty;

Whereas the Treaty has not provided the necessary powers;

Whereas the Council resolution of 14 January 1974 concerning an initial outline programme for the European Communities in the field of science and technology (5) emphasizes particularly that, whenever it proves necessary or desirable that non-member countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas the Scientific and Technical Information and Documentation Committee (STIDC) and the Scientific and Technical Research Committee (CREST) have delivered their opinions on the Commission proposal,

(1) OJ No C 85, 10. 4. 1978, p. 49.
(2) OJ No C 18, 23. 1. 1978, p. 13.
(3) OJ No C 122, 10. 12. 1971, p. 7.
(4) OJ No L 100, 21. 4. 1975, p. 18.
(5) OJ No C 7, 29. 1. 1974, p. 6.

HAS DECIDED AS FOLLOWS:

Article 1

A second Community plan of action in the field of scientific and technical information and documentation as set out in Annex I is hereby adopted for a period of three years with effect from 1 January 1978. The ceiling for expenditure commitments shall be fixed at 9·5 million European units of account, the European unit of account being defined by the relevant Financial Regulations.

Article 2

The Commission shall implement the plan of action, assisted by the Scientific and Technical Information and Documentation Committee (STIDC), the duties and method of operation of which are defined in Annex II. This Committee and the Scientific and Technical Research Committee (CREST) shall be kept regularly informed by the Commission of the progress of the work. The Commission shall also submit each year to the Council and the European Parliament a full report on the subject which will be incorporated in the general report.

Article 3

1. In accordance with Article 228 of the Treaty, the Community may conclude cooperation agreements with third countries participating in the European Conference of Postal and Telecommunications Administrations (CEPT). In principle, such agreements shall be concerned with the extension of Euronet and shall determine the conditions for the connection of the terminals and host computers of this network and the related technical arrangements. Exceptionally, however, they might also be concerned with other aspects of the plan of action.

2. The Commission shall be authorized to negotiate the cooperation agreements referred to in paragraph 1 after having sought the opinion of the STIDC for this purpose in accordance with Annex II (3)·(c).

Done at Luxembourg, 9 October 1978.

For the Council

The President

H.-J. VOGEL

ANNEX I

SECOND THREE-YEAR PLAN OF ACTION IN THE FIELD OF SCIENTIFIC AND TECHNICAL INFORMATION AND DOCUMENTATION

The plan's major objectives are the following:

1. To turn Euronet into a public operational on-line information network

Continuing to turn Euronet into a public operational on-line information network is to be a top-priority action in the period 1978-80. Moreover, the data transmission network should be improved and transformed into a public telecommunications network falling under the authority of European postal and telecommunications administrations. The network should enable users to gain direct access via their own terminals to information of all kinds in data bases mounted on a number of computers at centres of expertise widely distributed in member countries. Among the essential activities to be undertaken are:

— the preparatory launching of the telecommunications facilities,

— technical assistance and adaptation work relating to the connection of host computers and user terminals,

— commercial exploitation of the postal and telecommunications network,

— linking up to other networks,

— developing cooperation with the postal and telecommunications administrations.

Priority will be given to extending and improving the network to maintain easy and equal access for users in all the Member States.

2. To develop a market for scientific and technical information within the Community

This section of the action plan aims at stimulating the development of a genuine, prosperous and healthy Community information market, in accordance with the EEC Treaty and the Council resolution of 24 June 1971, with the prime objective of attending to the interests of the user. Major efforts will be made to:

— promote cooperation between existing information services in the Community, especially with a view to rationalization, improved quality and reduction of overall cost, within a framework of free competition,

— assist the user to exploit effectively the various types and sources of information available, in order to contribute to the achievement of the social and economic goals of the Community,

— improve access to information for small and medium-sized undertakings so that the creation within the Community of a market in scientific and technical information leads on the one hand to harmonized conditions of competition, whilst on the other, in the common interest, it renders all scientific and technical findings available for use by the greatest possible number of undertakings.

Activities to be undertaken will include investigation of user needs, user support by research services, promotion of the network, preparation of information systems and sectoral information services and participation in international information activities.

3. To promote technology and methodology for improving information services, with special emphasis on improving those of Euronet

In accordance with the Council resolution of 24 June 1971 which called for coordination among the Member States with regard to technological progress in the field of the science and processing of

documentation, this part of the action plan aims primarily at building on certain important work already under way and at ensuring that user interests are safeguarded in the context of emerging technological developments in so far as they affect on-line access to scientific and technical information. Particular areas considered for action include in particular assistance to the user with regard to using the different systems available via the network, support for the preparation of information exchange standards, the promotion of information exchange on information technology, STID aspects of multilingual systems and cooperation with postal and telecommunications administrations in developing standards for Euronet.

The action to be taken to achieve the above objectives will be carried out mainly on the basis of contracts with competent organizations in the Member States and could, in certain conditions, be extended to organizations in third countries.

ANNEX II

DUTIES AND METHOD OF OPERATION OF THE SCIENTIFIC AND TECHNICAL INFORMATION AND DOCUMENTATION COMMITTEE (STIDC)

1. Without prejudice to the responsibility taken on by the Commission in carrying out the second three-year plan of action in the field of scientific and technical information and documentation on science and technology, the STIDC shall contribute by its opinions to the optimum execution of the plan.

2. Under the second plan of action, the Commission shall consult the STIDC on all measures which it intends to take for:

   (a) turning Euronet into a public operational on-line information network;

   (b) the development of a market in information within the Community;

   (c) the promotion of technology and methodology in order to improve information services, in particular those of Euronet.

3. The Commission shall also seek the opinion of the STIDC on:

   (a) preparing for future work in this field;

   (b) coordinating the second plan of action with related programmes, and with the multilingual programme in particular;

   (c) conducting negotiations with non-Community institutions, such as institutions in third countries and the responsible telecommunications bodies under contract to set up Euronet.

4. The STIDC should also be asked to give an opinion on:

   (a) the detailed working out of policies, and priorities;

   (b) the annual preparation of budgets and allocation of approved appropriations;

   (c) the determination of the aims of, and the overall budgets for, projects;

   (d) the specification of work to be done and the determination of criteria for the selection of contractors;

   (e) the choice of contractors and the supervision of the projects.

5. The STIDC shall give opinions which shall be prepared by the secretariat and submitted for the approval of the Committee. Any member of the Committee may request that his point of view be recorded in these opinions. These opinions shall be forwarded to the Commission and a copy sent to the Council.

6. The STIDC shall lay down, in agreement with the Commission, the procedure for examining the measures referred to under 2, 3 and 4. This procedure should not interrupt the carrying out of the plan of action, particularly in the case of emergencies. In order to provide for flexible management, certain tasks shall be delegated to working parties.

7. The Commission shall periodically submit a report to the STIDC on the measures taken and the results obtained.

8. The STIDC shall consist of two representatives from each Member State, appointed for three years. The Member States may also appoint two alternate members.

9. The STIDC shall adopt its own rules of procedure.

10. The Commission shall provide the secretariat of the STIDC.

11. The provisions of this Annex shall neither modify the other tasks assigned to the STIDC in the resolution of 24 June 1971 nor its advisory relationship to CREST.

COUNCIL DECISION

of 9 October 1978

adopting a European Economic Community concerted project in the field of analysis of organic micropollutants in water

(78/888/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas by virtue of Article 2 of the Treaty the Community has as its task the promotion throughout the Community of a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in the declaration of 22 November 1973 (3) the Council approved the principles and objectives of a Community environmental policy and the general description of the action to be undertaken at Community level; whereas in the resolution of 17 May 1977 (4) the Council approved the continuation and implementation of a Community policy and action programme on the environment;

Whereas in its Decision 76/311/EEC (5) the Council adopted an environmental research programme;

Whereas in its Decision 77/488/EEC, Euratom (6) the Council adopted a research programme for the Joint Research Centre;

Whereas in the resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (7), the Council stressed that appropriate use should be made of the whole range of ways and means available, including concerted projects, and that whenever it proved desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas in its resolution of 14 Janaury 1974 on *inter alia* the coordination of national policies in the field of science and technology (8), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a research project on the analysis of organic micropollutants in water, carried out under an Agreement signed on 23 November 1971 within the framework of European Cooperation in the Field of Scientific and Technical Research (COST) (COST project 64 b), produced very encouraging results;

Whereas a concerted Community research project in the field of analysis of organic micropollutants in water, continuing and extending COST project 64b, will contribute effectively to the achievement of the abovementioned aims, in particular with regard to the reduction of environmental pollution;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of four years;

Whereas the execution of such research as described in Annex I will require a financial contribution of about eight million European units of account from the Member States and from the Community;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas CREST has given its opinion on the Commission proposal,

(1) OJ No C 108, 8. 5. 1978, p. 56.
(2) Opinion delivered on 1 June 1978 (not yet published in the Official Journal).
(3) OJ No C 112, 20. 12. 1973, p. 1.
(4) OJ No C 139, 13. 6. 1977, p. 1.
(5) OJ No L 74, 20. 3. 1976, p. 36.
(6) OJ No L 200, 8. 8. 1977, p. 4.
(7) OJ No C 7, 29. 1. 1974, p. 6.
(8) OJ No C 7, 29. 1. 1974, p. 2.

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement over a period of four years a concerted project in the field of analysis of organic micropollutants in water (hereinafter referred to as 'the project').

The project shall consist in coordination at Community level of the research described in Annex I and forming part of the national research programmes of the Member States and of the research programme of the Community.

Article 2

The Commission shall be responsible for coordination.

Article 3

The maximum financial contribution by the Community to such coordination shall be 480 000 European units of account, the European unit of account being as defined by the Financial Regulations applicable.

One member of staff shall be assigned to the coordination of the project.

Article 4

To facilitate the execution of the project, a Concerted Action Committee on the Analysis of Organic Micropollutants in Water, hereinafter referred to as 'the Committee', shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. The project leader shall, in particular, assist the Commission in its task of coordination.

The terms of reference and the composition of the Committee are laid down in Annex II. The Committee shall draw up its own rules of procedure. Its secretariat shall be provided by the Commission.

Article 5

1. In accordance with a procedure to be laid down by the Commission in agreement with the Committee, the Member States participating in the project and the Community shall exchange regularly all useful information concerning the execution of the research covered by the project. They shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. Any information shall be treated as confidential if so requested by the Member State which provides it.

2. The Commission shall prepare annual progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period the Commission, in agreement with the Committee, shall forward to the Member States and the European Parliament a general report on the execution and results of the project. The Commission shall publish this report six months after it has been forwarded to the Member States, unless a Member State objects. In this case the report shall be distributed, at their request, solely to the institutions and undertakings whose research or production activities justify access to the results of the research covered by the project. The Commission may make arrangements to ensure that the report remains confidential and is not divulged to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude an agreement with non-member States involved in European Cooperation in the Field of Scientific and Technical Research (COST) to ensure that the Community project and the corresponding programmes of these States are harmonized.

2. The Commission is hereby authorized to negotiate the agreement referred to in paragraph 1 in accordance with the conclusions approved by the Council on 18 July 1978 concerning European Cooperation in the Field of Scientific and Technical Research (COST).

Article 7

This Decision shall take effect on the day of its publication in the *Official Journal of the European Communities*.

Done at Luxembourg, 9 October 1978.

For the Council

The President

H.-J. VOGEL

ANNEX I

CONTRIBUTIONS BY THE MEMBER STATES AND THE JOINT RESEARCH CENTRE (JRC) TO THE PROJECT BY RESEARCH TOPICS

Research topics	Division of research work								
	B	D	DK	F	I	IRL	NL	UK	JRC
1. Sampling and sample treatment		X	X		X		X	X	X
— general development and evaluation of methods									
— methods for sampling sediments and indicator organisms									
2. Gas chromatographic analysis	X	X	X	X	X	X	X	X	X
3. Coupling gas chromatographs and mass spectrometers	X		X	X		X	X		X
4. Other separation techniques			X				X	X	X
— development of methods for liquid chromatography									
— improvement of equipment									
— other separation techniques									
5. Data collection and processing	X	X	X	X			X	X	X
— hard copy spectrum collection									
— establishment of a spectrum library									
6. Establishment of inventories	X	X	X	X	X	X	X	X	X
— inventory of pollutants									
— collection of data on conversion									

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED PROJECT COMMITTEE ON THE ANALYSIS OF ORGANIC MICROPOLLUTANTS IN WATER

1. The Committee shall:

1.1. contribute to the optimum execution of the project by giving its opinion on all aspects of its functioning;

1.2. evaluate the results of the project and draw conclusions as to their application;

1.3. be responsible for the exchange of information referred to in Article 5 (1);

1.4. keep abreast of national research being done in the fields covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project;

1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and the Member States participating in the project. The Commission shall forward these opinions to CREST.

3. The Committee shall be composed of the persons responsible for coordinating the national contributions to the project, one delegate from the Commission with responsibility for its contribution, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 9 October 1978

adopting a European Economic Community joint project in the field of physico-chemical behaviour of atmospheric pollutants

(78/889/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas by virtue of Article 2 of the Treaty the Community has as its task the promotion throughout the Community of a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in the declaration of 22 November 1973 (3) the Council approved the principles and objectives of a Community environmental policy and the general description of the action to be undertaken at Community level; whereas in the resolution of 17 May 1977 (4) the Council approved the continuation and implementation of a Community policy and action programme on the environment;

Whereas in its Decision 76/311/EEC (5) the Council adopted an environmental research programme;

Whereas in its Decision 77/488/EEC, Euratom (6) the Council adopted a research programme for the Joint Research Centre;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (7), the Council stressed that appropriate use should be made of the whole range of ways and means available, including concerted projects, and that whenever it proved desirable that third countries, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas in its resolution of 14 January 1974 on *inter alia* the coordination of national policies in the field on science and technology (8), the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a research project on the physico-chemical behaviour of sulphur dioxide in the atmosphere carried out under an Agreement signed on 23 November 1971 within the framework of European Cooperation in the Field of Scientific and Technical Research (COST) (COST project 61a), produced very encouraging results;

Whereas a concerted Community research project in the field of physico-chemical behaviour of atmospheric pollutants, continuing and extending COST project 61a, will contribute effectively to the achievement of the abovementioned aims, in particular with regard to the reduction of environmental pollution;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over a period of four years;

Whereas the execution of such research as described in Annex I will require a financial contribution of about eight million European units of account from the Member States and from the Community;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas CREST has given its opinion on the Commission proposal,

(1) OJ No C 108, 8. 5. 1978, p. 56.
(2) Opinion delivered on 1 June 1978 (not yet published in the Official Journal).
(3) OJ No C 112, 20. 12. 1973, p. 1.
(4) OJ No C 139, 13. 6. 1977, p. 1.
(5) OJ No L 74, 20. 3. 1976, p. 36.
(6) OJ No L 200, 8. 8. 1977, p. 4.
(7) OJ No C 7, 29. 1. 1974, p. 6.
(8) OJ No C 7, 29. 1. 1974, p. 2.

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement, over a period of four years, a concerted project in the field of physico-chemical behaviour of atmospheric pollutants (hereinafter referred to as 'the project'). The project shall consist in coordination at Community level of the research described in Annex I and forming part of the national research programmes of the Member States and of the research programme of the Community.

Article 2

The Commission shall be responsible for coordination.

Article 3

The maximum financial contribution by the Community to such coordination shall be 500 000 European units of account, the European unit of account being as defined by the Financial Regulations applicable.

Two members of staff shall be assigned to the coordination of the project.

Article 4

To facilitate the execution of the project, a Concerted Action Committee on the Physico-Chemical Behaviour of Atmospheric Pollutants, hereinafter referred to as 'the Committee', shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. The project leader shall, in particular, assist the Commission in its task of coordination.

The terms of reference and the composition of the Committee are laid down in Annex II. The Committee shall draw up its own rules of procedure. Its secretariat shall be provided by the Commission.

Article 5

1. In accordance with a procedure to be laid down by the Commission in agreement with the Committee, the Member States participating in the project and the Community shall exchange regularly all useful information concerning the execution of the research covered by the project. They shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. Any information shall be treated as confidential if so requested by the Member State which provides it.

2. The Commission shall prepare annual progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period the Commission, in agreement with the Committee, shall forward to the Member States and the European Parliament a general report on the execution and results of the project. The Commission shall publish this report six months after it has been forwarded to the Member States, unless a Member State objects. In this case the report shall be distributed, at their request, solely to the institutions and undertakings whose research or production activities justify access to the results of the research covered by the project. The Commission may make arrangements to ensure that the report remains confidential and is not divulged to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude an agreement with non-member States involved in European Cooperation in the Field of Scientific and Technical Research (COST) to ensure that the Community project and the corresponding programmes of these States are harmonized.

2. The Commission is hereby authorized to negotiate the agreement referred to in paragraph 1 in accordance with the conclusions approved by the Council on 18 July 1978 concerning European Cooperation in the Field of Scientific and Technical Research (COST).

Article 7

This Decision shall take effect on the day of its publication in the *Official Journal of the European Communities*.

Done at Luxembourg, 9 October 1978.

For the Council

The President

H.-J. VOGEL

ANNEX I

CONTRIBUTIONS BY THE MEMBER STATES AND THE JOINT RESEARCH CENTRE (JRC) TO THE CONCERTED PROJECT BY RESEARCH TOPICS

Research topics	Division of research work								
	B	D	DK	F	I	IRL	NL	UK	JRC
1. Studies on the conversion and transport of atmospheric pollutants:									
(a) laboratory studies		X		X	X	X	X	X	X
(b) field studies	X	X	X	X	X		X	X	X
(c) modelling		X			X		X		X
2. Studies on the elimination and absorption of atmospheric pollutants	X			X	X			X	

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE CONCERTED PROJECT COMMITTEE ON THE PHYSICO-CHEMICAL BEHAVIOUR OF ATMOSPHERIC POLLUTANTS

1. The Committee shall:

1.1. contribute to the optimum execution of the project by giving its opinion on all aspects of its functioning;

1.2. evaluate the results of the project and draw conclusions as to their application;

1.3. be responsible for the exchange of information referred to in Article 5 (1);

1.4. keep abreast of national research being done in the fields covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project;

1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and the Member States participating in the project. The Commission shall forward these opinions to CREST.

3. The Committee shall be composed of the persons responsible for coordinating the national contributions to the project, one delegate from the Commission with responsibility for its contribution, and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 30 October 1978

adopting joint research programmes and programmes for coordinating agricultural research

(78/902/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 43 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Whereas Council Regulation (EEC) No 1728/74 of 27 June 1974 on the coordination of agricultural research (3), provides for coordination at Community level of national agricultural research activities, in order to contribute towards attaining the objectives of the common agricultural policy;

Whereas Article 5 of Regulation (EEC) No 1728/74 provides that the Council is to decide upon specific measures for the coordination of national research activities so as to allow rational organization of means employed, efficient use of results and the orientation of such work towards the aims of the common agricultural policy, as well as the implementation of joint projects designed to second or supplement work undertaken in the Member States in fields which are of particular importance to the Community;

Whereas numerous regions of the Community are lagging behind in development and there are serious problems, particularly in the Mediterranean regions and certain less-favoured areas within the meaning of Council Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas (4); whereas measures must be taken in respect of these areas so as to enable better use to be made of the human resources and to encourage a general mobilization of all means of increasing a better return from the land resources, having regard in particular to its capacity for crop and livestock production and the possibility of recycling waste from the agricultural industry and industries concerned with primary processing of agricultural products, by defining crop-growing and livestock-rearing methods appropriate to the regional context; whereas the prospect of enlargement of the Community makes it more urgent to study solutions to these problems; whereas these measures will contribute by their specific approaches to re-establishing a natural balance guaranteeing harmonious development between individuals and their environment;

Whereas progress in research on the combating of diseases will help to eliminate major obstacles to the harmonization of laws and to trade, both within the Community and with non-member countries, in animals and livestock products; whereas the lack of a standard Community method for diagnosing bovine leucosis constitutes an obstacle to the movement of breeding cattle; whereas the existence in areas bordering on the Community of permanent centres of African swine fever continually threatens Community pig farms; whereas measures to achieve a standard method for the diagnosis of bovine leucosis and to control swine fever outside the territory of the Community therefore prove necessary; whereas attempts should also be made to ensure the systematic elimination of losses among young cattle by developing methods of controlling perinatal pathology;

Whereas there is serious economic wastage in the production of livestock, crop and primary processing of agricultural products, due to management methods which have upset the physiological, pathological and ecological balance;

Whereas in the Community there is a considerable deficit in vegetable proteins; whereas it has been found that fodder and cereals resources are under-utilized as a viable source of animal feed; whereas certain products could be replaced by the production of protein-bearing plants; whereas encouraging the production of fodder, protein-bearing plants, oil-bearing plants and long-strawed cereals implies increasing yield per unit of existing or potential Community crops;

Whereas the Community's financial contribution should be fixed in this Decision,

HAS DECIDED AS FOLLOWS:

Article 1

1. The joint research programmes and the programmes to coordinate research concerning socio-

(1) OJ No C 176, 25. 7. 1978, p. 2.
(2) OJ No C 261, 6. 11. 1978, p. 29.
(3) OJ No L 182, 5. 7. 1974, p. 1.
(4) OJ No L 128, 19. 5. 1975, p. 1.

structural objectives, the elimination of obstacles to trade on intra-Community agricultural markets, the efficiency of production and alternative products (increasing market value of fodder production), as specified in the Annex, are hereby adopted.

2. The programme shall run for five years from 1 January 1979.

3. The Community's financial contribution to the implementation of these programmes shall be 18 602 000 European units of account for five years.

The annual appropriations shall be fixed in the framework of the budgetary procedure.

Article 2

Detailed rules for the application of this Decision, concerning in particular the scientific priorities to be observed in the joint programmes and the coordination programmes, the criteria for selecting the research centres and institutes invited to participate in the specific measures, and the guidance of the programmes while they are being carried out, shall be adopted in accordance with the procedure laid down in Article 8 of Regulation (EEC) No 1728/74.

The annual allocations and the financial administration of the appropriations relating to the various programmes shall be decided in accordance with the same procedure.

Article 3

The Commission shall ensure the implementation of the coordination programmes by organizing seminars, conferences, study visits, exchanges of research workers and scientific working meetings and by collecting, analyzing and publishing the results.

Article 4

The Commission shall make an annual report to the European Parliament and the Council on the results of the activities carried out under the programmes covered by this Decision and on the use of the funds allotted for these measures.

Done at Luxembourg, 30 October 1978.

For the Council

The President

J. ERTL

ANNEX

SPECIFIC OBJECTIVES

A. SOCIO-STRUCTURAL OBJECTIVES

1. Programme for the appropriate use of land and rural development

— Research into the appropriate use of land (agriculture, forestry, pasture).

— Special problems of less-favoured regions :

  — forest-pasture systems, balance between forest and pasture having regard to the opportunities for extensive stock rearing, re-establishing wild life and fire prevention.

— Assessment of methods for the management of land and water resources.

— Measures to protect and maintain land and water resources.

— Regional development and redevelopment plans.

— The relationship between the individual and his environment.

2. Programme on Mediterranean agriculture

— New ways of exploiting agricultural resources in short supply.

— Systematic search for production alternatives so as to develop agriculture and encourage change to new varieties and types of farming in Mediterranean areas.

— Improving the productivity of existing crops (including permanent pasture).

3. Programme on agricultural waste and the effluent of intensive stock rearing

— Improvement of crops after the spreading of semi-liquid and solid manure and study of the long-term effects on the environment :

  — completion and extension of the mathematical model and associated research so as to achieve optimum monitoring of the natural regenerative capacity of soils (particularly long-term effects and trace elements).

— Technological problems posed by spreading semi-liquid manure and its influence on the environment (atmosphere, soil, water).

— Identification and control of odours produced by spreading semi-liquid manure and stabling animals.

B. ELIMINATION OF BARRIERS ON THE INTRA-COMMUNITY AGRICULTURAL MARKETS

4. Programme on animal pathology

— Protection of animals (mainly pigs and cattle) against perinatal diseases, intestinal diseases and respiratory complaints and study of their economic impact on the management of undertakings.

— Problems posed by the storage, transport and spreading of semi-liquid and solid manure as regards the quality of foodstuffs of vegetable and animal origin : study of their impact on animal and human health (communicable diseases).

— Bovine leucosis : establishment of a harmonized system for controlling this disease so that animals and meat may move freely on the market.

— African swine fever : establishment of a system for controlling and diagnosing African swine fever outside the Community so as to prevent contamination within the Community and to ensure that pigs and pigmeat continue to move freely on the market.

C. PRODUCUCTION EFFICIENCY

5. **Programme to improve the productivity of Community beef herds**

— Interaction between genotype and feeding and management.

— Optimal use of resources in less-favoured regions.

— Increasing the rate of reproduction of beef herds.

— Increasing carcase and meat quality.

— Impact of effects of stress and rearing conditions on herd productivity.

6. **Programmes on integrated and biological pest control**

— Studies for a more rational use of pesticides in the light of better knowledge of pest biology.

— Progressive replacement of chemical pesticides by methods which cause less damage to the environment and consume less energy.

7. **Programme on ways of improving plant resistance to disease and environmental pressures**

— Genetic improvement of plants for long-term resistance to disease.

— Improved efforts at coordination so as to achieve better use of gene banks.

8. **Programme on primary processing of agricultural products**

— Search for new outlets for surplus products.

— Quality aspects of market produce.

9. **Programme on elm disease**

— Pilot effort at coordination on tree disease problems.

D. ALTERNATIVE PRODUCTS (INCREASE OF MARKET VALUE OF FODDER PRODUCTION)

10. **Programme for improved production of vegetable proteins**

— Research into improvement of feed and seed legumes.

— Research into improvement of the main oil-bearing crops.

— Research into improvement of fodder grasses.

— Harvesting, treatment and preservation of fodder grasses and legumes.

COUNCIL DECISION

of 27 March 1979

adopting a research programme concerning the decommissioning of nuclear power plants

(79/344/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal presented by the Commission [1] after consultation of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament [2],

Having regard to the opinion of the Economic and Social Committee [3],

Whereas the programme of action of the European Communities on the environment, approved by the Council of the European Communities and the representatives of the Governments of the Member States, meeting within the Counil, in the resolution of 17 May 1977 [4], underlines the need for Community measures on the decommissioning of nuclear power plants and lays down the content of and procedures for implementing such measures;

Whereas certain parts of nuclear power plants inevitably become radioactive during operation; whereas it is therefore essential to find effective solutions which are capable of ensuring the safety and protection of both mankind and the environment against the potential hazards involved in the decommissioning of these plants,

HAS DECIDED AS FOLLOWS:

Article 1

A programme of research on the decommissioning of nuclear power plants shall be adopted for a period of five years as from 1 January 1979.

The text of this programme is annexed hereto.

Article 2

The ceiling for the expenditure commitments and the maximum number of staff necessary for the implementation of the programme shall be fixed at 4·7 million European units of account and three staff respectively, the European unit of account being defined by the Financial Regulation applicable to the general budget of the European Communities.

Article 3

If the next multiannual programme of the Joint Research Centre (JRC) provides for direct action in the field referred to in Article 1, in order to ensure the optimum cohesion between that direct action and the programme adopted by this Decision, the latter shall be reviewed in accordance with the appropriate procedures as soon as possible following the adoption of the next JRC programme, in order to take due account of the content thereof.

If the next JRC programme does not provide for direct action in the said field, the programme adopted by this Decision shall be reviewed at the end of the second year, in accordance with the appropriate procedures.

Article 4

The Commission shall ensure that the programme is carried out. To assist it in this task, an Advisory Committee on Programme Management in the field of the decommissioning of nuclear power plants is hereby set up, the terms of reference and composition of which shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management [5].

Done at Brussels, 27 March 1979.

For the Council

The President

A. GIRAUD

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(1) OJ No C 146, 21. 6. 1978, p. 3 and OJ No C 17, 19. 1. 1979, p. 4.
(2) OJ No C 6, 8. 1. 1979, p. 17.
(3) Opinion delivered on 29 and 30 November 1978 (not yet published in the Official Journal).
(4) OJ No C 139, 13. 6. 1977, p. 1.
(5) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

PROGRAMME OF RESEARCH ON THE DECOMMISSIONING OF NUCLEAR POWER PLANTS

The aim of the programme is the joint development of a system of management of redundant nuclear power plants and of the radioactive wastes produced in their dismantling which, at its various stages, will provide mankind and the environment with the best protection possible ; the programme seeks to promote :

A. **Research and development projects concerning the following subjects :**

Project No 1 : Long-term integrity of buildings and systems ;

Project No 2 : Decontamination for decommissioning purposes ;

Project No 3 : Dismantling techniques ;

Project No 4 : Treatment of specific waste materials : steel, concrete and graphite ;

Project No 5 : Large transport containers for radioactive waste produced in the dismantling of nuclear power plants ;

Project No 6 : Estimation of the quantities of radioactive wastes arising from decommissioning of nuclear power plants in the Community ;

Project No 7 : Influence of nuclear power-plant design features on decommissioning.

B. **Identification of guiding principles, namely :**

— certain guiding principles in the design and operation of nuclear power plants with a view to simplifying their subsequent decommissioning ;

— guiding principles in the decommissioning of nuclear power plants, which could form the initial elements of a Community policy in this field.

COUNCIL DECISION

of 27 March 1979

adopting a programme of research on the safety of thermal water reactors (indirect nuclear action)

(79/345/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal presented by the Commission [1] after consultation of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament [2],

Having regard to the opinion of the Economic and Social Committee [3],

Whereas on 22 July 1975 [4] the Council adopted a resolution on the technological problems of nuclear safety;

Whereas on 18 July 1977 [5] the Council adopted a resolution on a direct action programme on reactor safety;

Whereas the implementation of programmes of nuclear safety research is one of the principal ways in which the Commission can contribute to the safe production of nuclear power and to the protection of mankind and the environment;

Whereas it is advisable to supplement the direct action programme by an indirect action programme of research,

HAS DECIDED AS FOLLOWS:

Article 1

A programme of research on the safety of thermal water reactors shall be adopted for a period of five years as from 1 January 1979.

The text of this programme is annexed hereto.

Article 2

The ceiling for the expenditure commitments and the maximum number of staff necessary for the implementation of the programme shall be fixed at 6·3 million European units account and three staff respectively, the European unit of account being defined by the Financial Regulation applicable to the general budget of the European Communities.

Article 3

In order to ensure the optimum cohesion between direct and indirect action in the field referred to in Article 1, the programme set out in the Annex shall be reviewed in accordance with the appropriate procedures as soon as possible following the adoption of the next multiannual programme of the Joint Research Centre, in order to take due account of the content thereof.

Article 4

The Commission shall ensure that the programme is carried out in close conjunction with the direct action programme concerning reactor safety.

The Advisory Committee on Management of the direct action programme set up by the Council resolution of 18 July 1977 [6] shall also be competent for the indirect action programme which is the subject of this Decision.

Done at Brussels, 27 March 1979.

For the Council

The President

A. GIRAUD

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(1) OJ No C 146, 21. 6. 1978, p. 2 and OJ No C 299, 31. 12. 1978, p. 5.
(2) OJ No C 296, 11. 12. 1978, p. 23.
(3) Opinion delivered on 29 and 30 November 1978 (not yet published in the Official Journal).
(4) OJ No C 185, 14. 8. 1975, p. 1.
(5) OJ No L 200, 8. 8. 1977, p. 4.
(6) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

PROGRAMME OF RESEARCH ON THE SAFETY OF THERMAL WATER REACTORS (INDIRECT NUCLEAR ACTION)

The purpose of the programme will be the collaborative investigation of phenomena in order to advance further the safe operation of thermal water nuclear reactors.

The programme consists of three parts, each being a theoretical and experimental study on one of the following particular topics :

(a) the loss of coolant accident (LOCA) and the functioning and performance of the emergency core cooling system (ECCS) ;

(b) the protection of nuclear plant against gas cloud explosions ;

(c) the release and distribution of radioactive fission products in the atmosphere following a reactor accident.

The programme will be implemented under contract.

COMMISSION DECISION

of 8 June 1979

relating to the institution of a Scientific and Technical Committee for Fisheries

(79/572/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Whereas progress in constructing a Community system for the conservation and management of fishery resources requires the advice of highly qualified scientific personnel, particularly as to the application of marine and fisheries biology and fishing technology or similar disciplines;

Whereas this advice should be channelled by setting up a permanent committee established by the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

A Scientific and Technical Committee for Fisheries, hereinafter called 'the Committee', is hereby established by the Commission.

Article 2

1. The Committee may be consulted periodically by the Commission on the measures necessary to ensure the protection of fishing grounds, the conservation of the biological resources of the sea and their balanced exploitation.

2. The Committee shall prepare an annual report on the situation as regards fishery resources, on ways and means of conserving fishing grounds and stocks and on the scientific and technical facilities available within the Community.

3. The Committee may draw the attention of the Commission to any problem referred to in paragraphs 1 and 2.

Article 3

The Committee shall be composed of not more than 25 members.

Article 4

Members of the Committee shall be nominated by the Commission from highly qualified scientific persons having competence in the fields referred to in Article 2.

Article 5

The Committee shall elect a chairman and two vice-chairmen from among its members. They shall be elected on the basis of a simple majority of the members.

Article 6

1. The mandate of a member, chairman or vice-chairman of the Committee shall have a term of two years. It shall be renewable. However, the chairman and vice-chairmen of the Committee may not be immediately re-elected after being in office for two consecutive periods of two years. Duties shall not be subject to remuneration.

After the expiry of the period of two years, the members, chairman, or vice-chairmen of the Committee shall remain in office until their replacement or the renewal of their mandate.

2. Where it is impossible for a member, chairman or vice-chairman of the Committee to fulfil his mandate, or where he resigns voluntarily, he shall be replaced for the remaining term of the mandate in accordance with the procedure provided in Article 4 or 5.

Article 7

1. The Committee may form working groups from among its members.

2. The mandate of the working groups shall be to report to the Committee on the subjects referred to them by the latter.

Article 8

1. The Committee and the working groups shall meet at the invitation of a representative of the Commission.

2. The representative of the Commission as well as other officials and interested agents of the Commission shall take part in meetings of the Committee and the working groups.

3. The representative of the Commission may invite individuals having particular expertise in the subject being studied to participate at the meetings.

4. Commission departments shall provide the secretariat of the Committee and of the working groups.

Article 9

1. The deliberation of the Committee shall relate to requests for opinions made by the representative of the Commission.

The representative of the Commission, in requesting the opinion of the Committee, may fix a period within which the opinion is to be given.

2. Where the opinion requested is the subject of the unanimous agreement of the members of the Committee, the latter shall draw up common conclusions. In the absence of unanimous agreement, the various positions taken in the course of the deliberations shall be entered in a report drawn up on the responsibility of the representative of the Commission.

Article 10

Without prejudice to the provisions of Article 214 of the Treaty, members of the Committee shall not divulge information coming to their knowledge as a result of the work of the Committee when the representative of the Commission informs them that the opinion requested relates to matters of a confidential nature.

In this case only members of the Committee, the representative of the Commission, and other officials and interested agents of the Commission shall be present at the meetings.

Done at Brussels, 8 June 1979.

For the Commission

Finn GUNDELACH

Vice-President

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 3 August 1979

approving amendments to the Statutes of the 'Joint European Torus (JET), Joint Undertaking'

(79/720/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 50 thereof,

Having regard to the proposal from the Commission,

Whereas for the purposes of implementing the JET project the Council, by Decision 78/471/Euratom [1], established the 'Joint European Torus (JET), Joint Undertaking' and adopted the Statutes thereof;

Whereas on 14 September 1978 the European Atomic Energy Community and the Swiss Confederation concluded the Cooperation Agreement in the field of controlled thermonuclear fusion and plasma physics [2] providing for the participation of Switzerland in the JET project and its accession to the JET Joint Undertaking;

Whereas the JET Council has approved the accession of Switzerland to the 'Joint European Torus (JET), Joint Undertaking' and the amendments to the Statutes required for this accession,

HAS DECIDED AS FOLLOWS:

Article 1

The amendments to the Statutes of the 'Joint European Torus (JET), Joint Undertaking', annexed to this Decision, are hereby approved.

(1) OJ No L 151, 7. 6. 1978, p. 10.
(2) OJ No L 242, 4. 9. 1978, p. 1.

Article 2

This Decision shall enter into force on the day following its publication in the *Official Journal of the European Communities.*

Done at Brussels, 3 August 1979.

For the Council

The President

M. O'KENNEDY

ANNEX

The Statutes of the 'Joint European Torus (JET), Joint Undertaking' shall be amended as follows:

1. The following paragraph is inserted in Article 1.3 after 'the National Swedish Board for Energy Source Development (hereinafter referred to as "the Board")':

   'the Swiss Confederation (hereinafter referred to as "Switzerland"),'.

2. Articles 4.1.1 and 4.1.2 are replaced by the following:

   '4.1.1. The Members of the Joint Undertaking shall be represented in the JET Council as follows, the vote of each pair of representatives being weighted as indicated:

Representing	*Number of representatives*	*Weighting of vote*
Euratom	2	5
Belgium	2	2
CNEN and CNR jointly	2	5
CEA	2	5
Risø	2	2
Ireland	2	1
Luxembourg	2	1
IPP and KFA jointly	2	5
Board	2	2
Switzerland	2	2
FOM	2	2
Authority	2	5

   4.1.2. For their adoption, acts of the JET Council shall require at least 26 votes in favour.'

3. The first sentence of Article 16.1.4.1 is replaced by the following:

   'The Commission will, in accordance with the provisions of Article 13 of the Euratom Treaty and subject to the conditions contained therein, communicate the reports referred to in point 16.1.3 to the Member States, to persons and undertakings (as defined in Article 196 of that Treaty), to the Governments of Sweden and Switzerland as well as to persons and undertakings established on their territories.'

4. The first sentence of Article 16.2.3 is replaced by the following:

   'Under the patent applications and patents referred to in point 16.2.1, the Commission may, in accordance with the provisions of Article 12 of the Euratom Treaty and subject to the conditions contained therein, grant on request non-exclusive licences to the Member States of Euratom, to persons and undertakings (as defined in Article 196 of that Treaty), to the Governments of Sweden and Switzerland as well as to persons and undertakings established on their territories.'

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 11 September 1979

on a Community action promoting microelectronic technology

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Whereas, in order to meet in particular the requirements of the systematic Community programme provided for in the Council resolution of 15 July 1974 on a Community policy on data processing [1] Europe must possess technologies of the most advanced type;

Whereas the timely application of the latest microelectronic component technology is of critical importance to the development of European industry as a whole;

Whereas dependence on external sources of supply of equipment, materials and technology in this field can delay the introduction of new products and render large parts of European industry uncompetitive;

Whereas the ability to apply microelectronic technology in a wide range of industries is linked to the availability of innovative engineers and technicians trained in the new technologies;

Whereas advanced computer-aided design and testing facilities will be essential to a wide range of industries;

Whereas major investments are needed to develop and make available in time the technologies and tools which could enable European industry to meet the competition of the most advanced products in 1985;

believing that these aims can be achieved only with the help of the main industrial users, suppliers and other experts throughout Europe,

INVITES THE COMMISSION TO:

1. examine the possibilities and methods of co-ordinating national projects in this sector and,

2. in the light of this examination to submit to it before 11 March 1980, specific projects at Community level, which the Council undertakes to act on as soon as possible. Such projects must comply with the following criteria:

   (a) implementation of the project at Community level must have economic or technical advantages over implementation at national level;

   (b) the project must be jointly proposed by undertakings, research bodies or users from several Member States;

[1] OJ No C 86, 20. 7. 1974, p. 1.

3. examine, as a matter of priority, the following areas:

   (a) the development in the Community of the production of advanced equipment and methods needed to realize a leading European capability in microelectronic technology;

   (b) further education with a view to increasing the number and mobility of engineers and technicians specialized in the new technology and its application;

   (c) the development, with the aid of computers, of harmonized systems for the design and testing of VLSI components accessible to a broad span of European industries.

For the Council

The President

Ray Mc SHARRY

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 11 September 1979

adopting a multiannual programme (1979 to 1983) in the field of data processing

(79/783/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, in its resolution of 15 July 1974 on a Community policy on data processing (3), the Council considered it desirable to prepare, in the medium term, a systematic Community programme to promote research, industrial development and applications of data processing;

Whereas, with a view to the effective achievement of the common market, the improved use of data processing and the harmonious incorporation of data processing in society, a series of general measures should be taken, particularly in the area of standardization, public procurement, cooperation between research centres and organizations supporting the use of data processing, training, protection of individual privacy and of industrial property and a careful study be made of developments in this field, taking into account its influence on employment generally;

Whereas the use of data processing should be developed efficiently; whereas cooperation between users on a Community scale should be promoted to this end, in particular through the development of software and of applications with a view to more effective standardization and greater portability;

Whereas, to this end, the programme should cover particularly the coordination of national promotion measures and, in appropriate areas of common European interest, Community support; whereas this support will be ensured in accordance with Council Regulation (EEC) No 1996/79 of 11 September 1979 on a Community support mechanism in the field of data processing (4);

Whereas the Commission should ensure that the programme is implemented; whereas it will be assisted in this task by the Advisory Committee for the Management and Coordination of Data-Processing Programmes, set up under Decision 79/784/EEC (5);

Whereas the programme should be examined and, possibly, revised after two years;

Whereas the programme appears necessary if certain Community aims in the operation of the common market are to be achieved; whereas the Treaty establishing the European Economic Community has not however provided the necessary powers,

(1) OJ No C 241, 10. 10. 1977, p. 41.
(2) Opinion delivered on 27 October 1977 (not yet published in the Official Journal).
(3) OJ No C 86, 20. 7. 1974, p. 1 (corrigendum OJ No C 91, 3. 8. 1974, p. 10).

(4) See page 1 of this Official Journal.
(5) See page 29 of this Official Journal.

HAS DECIDED AS FOLLOWS:

Article 1

A four-year programme is hereby adopted for the field of data processing. Its objects are as follows:

— general measures: standardization, public procurement, collaboration between research centres and organizations supporting the use of data processing, a study of the sector and of employment, the confidentiality and security of data, and legal protection for comupter programs,

— promotion measures: measures covering software, applications and aspects to be agreed on by the Council in the light of the studies carried out within the framework of the general measures and in implementation of the Council resolution of 11 September 1979 on a Community action promoting micro-electronic technology (1).

The programme is defined in the Annex hereto.

Article 2

The appropriations necessary for the implementation of the programme, the maximum amount of which shall be fixed at 10 million European units of account for the general projects and at 15 million European units of account for the promotion projects for the data-processing sector, shall be entered in the budget of the European Communities.

Article 3

The Commission shall ensure implementation of the programme, with a particular view to coordinating national programmes and measures and to granting Community financial support for certain projects of common European interest. It shall be assisted by the Advisory Committee for the Management and Coordination of Data-Processing Programmes.

Article 4

The Commission shall submit an annual report to the Council. Both the programme and the details of its management shall be examined in 1981, to allow for the implementation of possible modifications from the beginning of 1982. The Commission shall, on the advice of the Committee referred to in Article 3, submit to the Council any relevant proposals for modification of the programme within the limits of the amounts laid down in Article 2.

Article 5

1. In accordance with Article 228 of the Treaty, the Community may conclude an Agreement with non-member States participating in European Cooperation in the field of scientific and technical research (COST) with a view to ensuring cooperation between the Community tele-data processing project referred to in point 1.3.1 (e) of the Annex and the relevant programmes of such States.

2. The Commission is hereby authorized to negotiate the Agreement referred to in paragraph 1 in accordance with the conclusions approved by the Council on 18 July 1978 concerning COST.

Done at Brussels, 11 September 1979.

For the Council

The President

R. Mc SHARRY

(1) OJ No C 231, 13. 9. 1979, p. 1.

ANNEX

MULTIANNUAL PROGRAMME (1979 TO 1983) FOR A COMMUNITY POLICY IN THE FIELD OF DATA PROCESSING

1. GENERAL MEASURES

1.1. STANDARDIZATION POLICY

Aims:

(a) to define priority sectors after the widest possible consultation with users and industry;

(b) to promote research or any other form of action designed to foster a Community contribution towards international standards and, where necessary, practices approved at Community level;

(c) to ensure that the Member States apply standards approved at Community level, particularly in the public sector, and to encourage their general application through concerted measures between national centres competent in the matter;

(d) to look to the dissemination of Community information in the field of standardization;

(e) to facilitate contribution of Community organizations towards international standardization.

1.2. PUBLIC PROCUREMENT

Aims:

(a) to determine the most efficient methods for the rapid application in the public procurement sector of standards on which agreement has been reached;

(b) to examine the measures required in the public procurement sector to assist European industry in preparing for the full application of the relevant Community rules;

(c) to coordinate national efforts concerning the general appraisal of systems and, in conjunction with national research centres in the field of data processing, to lay down principles for the establishment of appraisal criteria;

(d) to study the possibility of laying down a number of principles to be applied in the evaluation of tenders;

(e) to study the possibility of establishing common principles on the basis of which standard conditions of contract can be drawn up;

(f) to organize exchanges of technical experience between national departments responsible for public procurement and to promote these exchanges by coordinating the work of national research centres in the field of data processing;

(g) to compare the progress of European industry with the measures taken by the Member States in the area of data-processing procurement; to collect the necessary statistical data; to facilitate the establishment of equal conditions for the access of companies to Community markets within the framework of Council Directive 77/62/EEC of 21 December 1976 coordinating procedures for the award of public supply contracts (1);

(h) to identify topics likely to lead to the development of projects of common interest to public procurement agencies.

(1) OJ No L 13, 15. 1. 1977, p. 1.

1.3. GENERAL ASPECTS OF THE DATA-PROCESSING POLICY

1.3.1. **Collaboration in research and development**

Aims:

(a) the establishment of procedure for joint consultations between research centres and with the Community to ensure effective contact with the Commission in the framework of the Community data-processing policy;

(b) the execution or extension of studies in support of the use of informatics which are decided on by the Council (2);

(c) a contribution towards the studies decided on by the Council in the field of software portability (1), and towards their development with regard to selection criteria and the assessment of certain factors;

(d) the assistance of experts in contributing towards examination of technical documents as regards the award of contracts in the field of data processing;

(e) the discussion and possible definition of research projects in the context of the Community data-processing policy, for the purpose of:

(i) promoting collaboration and the exchange of results between research teams, users and groups of users,

(ii) pooling of resources,

(iii) developing solutions to transnational problems,

(iv) transferring results to industry,

(v) promoting standardization,

in particular by support for:

(i) the mobility of research workers and for other forms of collaboration relating to research into real-time data processing, and

(ii) concerting the Member States' research activities in the field of network technology.

1.3.2. **Medium-term study of the data-processing sector**

Aims:

(a) continuation on a permanent basis of the work which led to the preparation of the report on developments in the data-processing sector required under the Council resolution of 15 July 1974 on a Community policy on data processing;

(b) widening of the terms of reference of the work to include forward data in the medium and long term. In this context, the execution of studies of the market and the priorities for possible common measures in the field of peri-informatics;

(c) establishment of the necessary relations with organizations working in similar fields so as to compare the results obtained and avoid duplication;

(d) preparation of an annual consolidated report containing an interpretation of statistical data and the appropriate diagnoses;

(e) systematic studies in the field of electronic component technology with a view to defining the aspects of and ways of implementing projects which will be the subject of Commission proposals under the Council resolution of 11 September 1979 on a Community project promoting micro-electronic technology.

1.3.3. **Effects of data processing on employment and its impact on society**

Aims:

(a) introduction, with the Governments of the Member States and both sides of industry, of suitable methods for ensuring the collection of data or the holding of any necessary discussions on the subject;

(1) OJ No L 255, 6. 10. 1977, p. 25.
(2) OJ No L 255, 6. 10. 1977, p. 22.

(b) inclusion of employment problems in the medium- and long-term study of the data-processing sector, including regional aspects ;

(c) other aspects of the impact of data processing on society, in particular training problems.

1.3.4. **Confidentiality and data security**

Aims :

(a) further studies on confidentiality and data security ;

(b) examination of legislation in force or in preparation in the Member States and discussion of harmonization possibilities and of instruments which might be implemented at Community level ;

(c) development at Community level of cooperation with non-member States with a view to the exchange of knowledge and of experience gained in this field.

1.3.5. **Legal protection for computer programs**

Aims :

(a) consultation by the Commission with the circles concerned ;

(b) development of suitable relations between the Commission and national or international bodies dealing with the problem.

2. PROMOTION MEASURES

2.1. GENERAL OBJECTIVES AND CRITERIA

2.1.1. The programme is designed to promote projects of Community interest meeting the following objectives :

(a) contribution towards standardization and software portability policies ;

(b) better use of data processing and the creation of more uniform markets ;

(c) rationalization of public expenditure ;

(d) development in the Community of a strong and competitive European data-processing industry, in particular through industrial cooperation which would enable it to achieve better market penetration ;

(e) applications which improve the competitiveness of European industry, thus expanding its share of exports to markets of non-member States.

2.1.2. The promotion measures concern the software and applications sub-sector.

2.1.3. Financing will be provided by the Community support scheme. Since undertakings should, in principle, see themselves that their development projects are implemented, the scheme is designed in particular to supplement the financing of projects presenting too high a degree of risk to be assumed by the private sector alone.

With a view to making the most efficient use of public funds in the Community and to strengthening the competitiveness of European industry, national programmes and measures in this sector must be coordinated, so that national programmes and the Community programme become complementary aspects contributing to a common effort and thereby help to establish balanced competition.

2.1.4. **All projects must satisfy the following general criteria :**

(a) studies and developments must be capable of being completed within the space of four years ;

(b) the project must not be dependent on a prior process of legal or other harmonization ;

(c) implementation of a project at Community level must bring economic or technical benefits ; such benefits must be greater than those it would achieve at national level, where, in the absence of Community aid, the project could not be implemented, or could be implemented only with difficulty ;

(d) encouragement will be given to projects involving industrial cooperation between undertakings from different Member States. The efficiency of the proposed method of cooperation will therefore be a factor in the assessment, the aim being to foster the development of commercially viable industrial structures adapted to the European scale and to strengthen competition ;

(e) projects proposed by users should be based on cooperation on a scale of more than one Member State ;

(f) any software developed in these projects must be portable.

2.2. SOFTWARE AND APPLICATIONS

2.2.1. **General software**

Support may be granted for studies and projects on the development of general software which, in addition to satisfying the general criteria set out under 2.1.4, meet one or more of the following objectives :

(a) the implementation and diffusion of standards and norms ;

(b) improved portability ;

(c) improved conversion conditions ;

(d) greater efficiency of data-processing systems ;

(e) the development of network management techniques or of techniques relating to distributed data processing, with a view to a more general use of Community standards and norms.

2.2.2. **Applications**

Support may be granted for applications which, in addition to satisfying the general criteria set out in 2.1.4, possess one or more of the following features :

(a) applications of a transnational character (e.g. environmental monitoring, air, sea and land traffic control, international transport operations, customs) ;

(b) applications which help, through data processing, to fulfill specific European Economic Community policy aims (e.g. free movement of labour and capital, international communications, agricultural and regional policies, energy policy, environmental protection, social policy) ;

(c) applications which make for obvious savings in public expenditure through either a joint study or joint development (e.g. health, medical and educational applications likely to be implemented in more than one Member State) ;

(d) applications which increase productivity and competitiveness in economic sectors important to the Community through effective application, taking particular account of standardization objectives, of data-processing techniques, such as computer-aided design (CAD), process and industrial control systems and automated administrative systems, where a common need arises ;

(e) applications whose implementation at Community level is such as to have a significant impact on standards on a Community scale and on strategic developments in the field of distributed data processing, such as networks, data communication, etc.

2.3. PERI-INFORMATICS AND MICRO-ELECTRONIC TECHNOLOGY

In the light of developments in the programme and of studies carried out within the framework of those referred to in 1.3.2, the Commission will be able to submit to the Council proposals on support for these aspects and on other aspects.

Criteria and more precise objectives shall be drawn up in the light of the studies undertaken and of consultation between the Member States in the Advisory Committee for the Management and Coordination of Data-Processing Programmes. The objective of such consultation will be to insert in the Community framework any promotion programme which may appear necessary.

COUNCIL DECISION

of 11 September 1979

setting up an Advisory Committee for the Management and Coordination of Data-Processing Programmes

(79/784/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the draft Decision submitted by the Commission,

Whereas, in its resolution of 15 July 1974 on a Community policy on data processing [1], the Council considered it desirable to prepare, in the medium term, a systematic Community programme providing in particular for the coordination of national promotion and, in appropriate fields of joint European interest, Community financing;

Whereas, by its Decision 79/783/EEC [2], the Council adopted a multiannual programme (1979 to 1983) in the field of data processing;

Whereas, in accordance with Article 3 of Decision 79/783/EEC the Commission will ensure the implementation of this programme; whereas it will be assisted by a Committee composed of representatives of the Member States;

Whereas specialized subcommittees should be set up, in particular in the field of standardization, which calls for a standing consultation procedure;

Whereas it is therefore appropriate to set up this Committee,

HAS DECIDED AS FOLLOWS:

Article 1

An Advisory Committee for the Management and Coordination of Data-Processing Programmes, hereinafter called 'the Committee', is hereby set up.

The Committee shall consist of representatives who are appointed by the Member States and who may call on the assistance of experts or advisers, according to the nature of the measures under consideration.

The Committee shall be chaired by a representative of the Commission.

The Commission shall provide the secretariat services for the Committee.

The Committee shall adopt its own rules of procedure.

Article 2

The Committee shall assist the Commission in the execution of the multiannual programme (1979 to 1983) in the field of data processing.

The Committee shall be consulted in particular on the following:

(a) application of the criteria for the choice of projects;
(b) the choice of project directors;
(c) the choice of the bodies to which the work is entrusted;
(d) preparation and — when projects are decided on — provision of assistance to the Commission in the carrying out of projects.

With regard to the Community support mechanism, the Committee shall be consulted as laid down in Article 8 of Council Regulation (EEC) No 1996/79 of 11 September 1979 on a Community support mechanism in the field of data processing [3].

Article 3

The Committee may set up specialized subcommittees. It shall define the duties and composition of such subcommittees.

Article 4

The Commission shall submit an annual report to the Committee on the progress of its efforts to ensure the coordination of national programmes in the fields of data processing covered by the multiannual programme (1979 to 1983).

With a view to promoting such coordination, the Member States and the Commission shall keep one another informed and shall hold consultations within the Committee on the main points of their national programmes and any amendments to these programmes.

Done at Brussels, 11 September 1979.

For the Council

The President

R. Mc SHARRY

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(1) OJ No C 86, 20. 7. 1974, p. 1.
(2) See page 23 of this Official Journal.
(3) See page 1 of this Official Journal.

COUNCIL DECISION

of 11 September 1979

adopting an energy research and development programme 1979 to 1983

(79/785/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas Article 2 of the Treaty assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living ; whereas Article 3 of the Treaty sets out the activities of the Community to these ends ;

Whereas energy research and development is an important factor in achieving these objectives ;

Whereas the energy research and development programme adopted by Decision 75/510/EEC (4) has led to positive results and has opened promising perspectives for the objectives studied ;

Whereas the research and development activities which form the subject of the present Decision therefore seem necessary and constitute an adequate means for prolonging activities already under way with a view to attaining certain Community objectives in the course of the operation of the common market ;

Whereas the Council has adopted Regulations (EEC) No 1302/78 (5) and (EEC) No 1303/78 (6) on the granting of financial support for projects to exploit alternative energy sources and for demonstration projects in the field of energy saving ;

Whereas such a support would only be given to projects whose industrial and commercial viability had already been shown by previous studies and research ;

Whereas the Council adopted the resolution concerning Community energy policy objectives for 1985 on 17 December 1974 (7) ;

Whereas the Council adopted a resolution on an initial outline programme of the European Communities in the field of science and technology on 14 January 1974 (8) ;

Whereas the Scientific and Technical Research Committee (CREST) expressed its opinion ;

Whereas the Treaty has not provided the specific powers necessary for these purposes,

HAS DECIDED AS FOLLOWS :

Article 1

An energy research and development programme for the European Economic Community is hereby adopted in the form set out in the Annex hereto for a four-year period starting on 1 July 1979.

Article 2

1. The appropriations necessary for the implementation of the programme, the amount of which shall be fixed at 105 million European units of account, including a complement of 34 staff, shall be entered in the budget of the European Communities. The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (9).

2. In the light of experience gained in the course of the execution of this programme and subject to the prior opinion of the Scientific and Technical Committee (CREST) and of the competent Advisory Committees on Programme Management, the Commission shall be authorized to transfer funds from one subprogramme to another provided that such fund transfers do not result in an increase or a reduction of more than 10 % of the original allocation to each subprogramme as defined in the Annex.

(1) OJ No C 228, 26. 9. 1978, p. 4.
(2) OJ No C 39, 12. 2. 1979, p. 57.
(3) OJ No C 133, 28. 5. 1979, p. 21.
(4) OJ No L 231, 2. 9. 1975, p. 1.
(5) OJ No L 158, 16. 6. 1978, p. 3.
(6) OJ No L 158, 16. 6. 1978, p. 6.
(7) OJ No C 153, 9. 7. 1975, p. 2.
(8) OJ No C 7, 29. 1. 1974, p. 6.
(9) OJ No L 356, 31. 12. 1977, p. 1.

Article 3

The Commission shall be responsible for the implementation of the programme and shall be assisted by Advisory Committees on Programme Management set up for this purpose and governed by the rules laid down in the Council resolution of 18 July 1977 [1] and shall keep the Scientific and Technical Research Committee (CREST) informed.

Article 4

In 1981 the programme shall be reviewed, particularly with regard to priorities, and possibly revised in accordance with the appropriate procedure and after consultation of the Advisory Committees on Programme Management and of the Scientific and Technical Research Committee (CREST). This revision shall also take into account the final evaluation of the first energy research and development programme as well as the demonstration projects.

A report on this review and on the possible revision shall be drawn up for the European Parliament and the Council.

Article 5

The information resulting from the implementation of the programme defined in the Annex shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions, for the dissemination of information, relating to research programmes for the European Economic Community [2].

Done at Brussels, 11 September 1979.

For the Council

The President

R. Mc SHARRY

[1] OJ No C 192, 11. 8. 1977, p. 1.

[2] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

INDIRECT ACTION

ENERGY RESEARCH AND DEVELOPMENT PROGRAMME

The programme comprises the following subprogrammes :

1. Energy conservation

An expenditure of 27 million European units of account is allocated to this subprogramme.

It covers the following sectors :

Sector A : residential and commercial applications,
Sector B : industry,
Sector C : transport,
Sector D : energy transformation,
Sector E : energy storage.

This work will be carried out under contract.

2. Production and utilization of hydrogen

An expenditure of eight million European units of account is allocated to this subprogramme.

It comprises the following projects :

Project A : thermochemical production of hydrogen,
Project B : electrolytic production of hydrogen,
Project C : transportation, storage and utilization of hydrogen.

This work will be carried out under contract.

3. Solar energy

An expenditure of 46 million European units of account is allocated to this subprogramme.

It comprises the following projects :

Project A : solar-energy applications to dwellings,
Project B : thermomechanical solar-power plants,
Project C : photovoltaic-power generation,
Project D : photochemical, photoelectrochemical and photobiological processes,
Project E : energy from biomass,
Project F : solar-radiation data,
Project G : wind energy,
Project H : solar energy in agriculture and industry.

This work will be carried out under contract.

4. **Geothermal energy**

An expenditure of 18 million European units of account is allocated to this subprogramme.

It comprises the following projects :

Project A : integrated geological, geophysical and geochemical investigations in selected areas,

Project B : subsurface problems of natural hydrothermal resources,

Project C : surface problems related to the use of hydrothermal resources,

Project D : hot dry rocks.

This work will be carried out under contract.

5. **Energy systems analysis and strategy studies**

An expenditure of six million European units of account is allocated to this subprogramme.

It comprises the following actions :

Action 1 : improvement and further development of the medium and long term Community energy models,

Action 2 : development of new concepts for energy systems' representations,

Action 3 : development of new means for better communication between model builders and model users,

Action 4 : world energy modelling.

This work will be carried out under contract.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 9 October 1979

reviewing the second multiannual research and development programme for the European Economic Community in the environmental field (indirect action) adopted by Decision 76/311/EEC

(79/841/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, the Council, pursuant to Article 235 of the Treaty, in its Decision 76/311/EEC (4) adopted a multiannual research and development programme in the environmental field (indirect action);

Whereas Article 4 of the abovementioned Decision provides for the review of the said programme;

Whereas the Community is responsible for the conclusion of agreements with third countries in the areas covered by this Decision; whereas it may be advisable to associate the States participating in European Cooperation in the field of Scientific and Technical Research (COST) with the programme covered by this Decision; whereas it is advisable, as soon as this Decision is adopted, to open negotiations with the States concerned so that such agreements can be rapidly concluded;

Whereas the Scientific and Technical Research Committee (CREST) has submitted an opinion on the Commission proposal;

Whereas the programme should therefore be reviewed,

HAS DECIDED AS FOLLOWS:

Article 1

Article 2 of Decision 76/311/EEC shall be replaced by the following:

'Article 2

The appropriations necessary to execute the programme, the amount for which is set at 20·8 million European units of account, including a staff of 10, shall be entered in the budget of the European Communities.

The European unit of account is as defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (1).'

The following shall appear as footnote:

'(1) OJ No L 356, 31. 12. 1977, p. 1'.

(1) OJ No C 173, 20. 7. 1978, p. 3.
(2) OJ No C 296, 11. 12. 1978, p. 42.
(3) OJ No C 128, 21. 5. 1979, p. 9.
(4) OJ No L 74, 20. 3. 1976, p. 36.

Article 2

The following Article shall be added to Council Decision 76/311/EEC :

'Article 7

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States participating in European Cooperation in the field of Scientific and Technical Research (COST) with a view to associating them with this programme.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.'

Article 3

The Annex to Decision 76/311/EEC shall, with effect from 1 January 1979, be replaced by the Annex to this Decision.

Done at Luxembourg, 9 October 1979.

For the Council

The President

D. O'MALLEY

ANNEX

Environmental Research Programme (1976/1980)

(indirect action — non-nuclear projects)

The main aim of the research will be to acquire the scientific and technical know-how necessary for implementation of the environmental programme of the Community. It will cover the following four areas :

Research area 1 (research designed to establish criteria, i.e. exposure-effect relationships for pollutants and chemicals which could contaminate the environment)

1. *Heavy metals*: especially pathway to man through food, water and air and their metabolism.
2. *Organic micropollutants and new chemicals :* especially evaluation of the effects on health and the environment of synthetic chemicals.
3. *Asbestos and other fibrous materials :* detection methods and health effects.
4. *Air quality :* application of techniques for the remote sensing of air pollution ; effects on health and vegetation.
5. *Water quality :* especially epidemiological survey on health status of selected population group in relation to the quality of drinking water.
6. *Waste heat :* ecological and microclimatic effects.
7. *Marine pollution :* especially effects of hydrocarbons and decontamination methods.
8. *Noise pollution :* continuation of the epidemiological survey on the effects of noise on sleep ; effects of vibrations and low-frequency noises.

Research area 2 (research and development on environmental information management, essentially concerning chemicals which could contaminate the environment)

Continuation of collection and handling of data on chemicals in the framework of the ECDIN project.

Research area 3 (research and development on the reduction and prevention of pollution and nuisances)

— Reduction of water pollution, including tests of advanced methods for water treatment.

— Waste : effects on the environment, relevant technology.

Research area 4 (research and development concerning the protection and the improvement of the natural environment)

1. Ecosystems, ecology and biogeochemical cycles, especially studies of ecosystems (contribution to the establishment of an ecological cartography) : ozone-shield depletion in the stratosphere and CO_2 accumulation in the atmosphere.
2. Reclamation of derelict land.
3. Bird protection : population dynamics and habitat protection.

COUNCIL DECISION

of 9 October 1979

adopting a research and development programme in the field of reference materials and methods (Community Bureau of Reference — BCR) and applied metrology (non-nuclear indirect action) (1979 to 1982)

(79/842/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas according to Article 3 (a) and (h) of the Treaty, the activities of the Community shall include *inter alia* the elimination, as between Member States, of quantitative restrictions on the import and export of goods, and of all other measures having equivalent effect, together with the approximation of the laws of Member States to the extent required for the proper functioning of the common market;

Whereas the projects covered by this Decision are of such a nature as to make an effective contribution to the carrying out of these tasks and whereas, therefore, they are necessary within the context of the functioning of the common market for the achievement of the said objectives;

Whereas the Treaty does not provide the necessary powers for this purpose;

Whereas, in its resolution of 14 January 1974 on a first action programme of the European Communities in the field of science and technology (4), the Council stated that the whole range of available ways and means, including indirect action, should be used as appropriate;

Having regard to the opinion delivered by the Scientific and Technical Research Committee (CREST),

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme in the field of reference materials and methods and of applied metrology, is hereby adopted for a period of four years with effect from 1 January 1979.

The text of the programme is annexed to this Decision.

Article 2

The appropriations necessary for the implementation of the programme, the amount of which is fixed at 10·3 million European units of account, including 14 staff shall be entered in the budget of the European Communities.

The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities.

Article 3

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by the Advisory Committee on Programme Management (Reference Materials and Methods), the terms of reference of which are set out by the Council in its resolution of 18 July 1977 (5), and whose powers are hereby extended to projects covered by this decision.

Within the context of the four-year programme of the Joint Research Centre (JRC) adopted by Decision 77/488/EEC, Euratom (6), direct action by the JRC in the same field shall remain associated with the implementation of projects 1 and 2 of the programme adopted by this Decision.

Article 4

In order that due account may be taken of the content of the new four-year programme of the JRC, the programme adopted by this Decision shall, within the six months following the adoption of the new JRC programme, be reviewed and possibly revised in accordance with the appropriate procedure and after consultation of the Advisory Committee on Programme Management.

(1) OJ No C 176, 25. 7. 1978, p. 5 and OJ No C 17, 19. 1. 1979, p. 4.
(2) OJ No C 6, 8. 1. 1979, p. 20.
(3) Opinion delivered on 19 and 20 December 1978 (not yet published in the Official Journal).
(4) OJ No C 7, 29. 1. 1974, p. 6.
(5) OJ No C 192, 11. 8. 1977, p. 1.
(6) OJ No L 200, 8. 8. 1977, p. 4.

During the third year, there shall also be a general review of the programme which will possibly be revised in accordance with the appropriate procedure and after consultation of the Advisory Committee on Programme Management.

Article 5

The knowledge resulting from the implementation of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [1].

Done at Luxembourg, 9 October 1979.

For the Council

The President

D. O'MALLEY

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

Research and Development Programme in the field of reference materials and methods (Community Bureau of Reference — BCR) and applied metrology (non-nuclear indirect action)

The programme comprises three projects as described below. The first two are activities of the Community Bureau of Reference.

The aim of the programme is to strengthen, supplement and harmonize national activities in the field of reference materials, analytical and measuring methods and applied metrology.

1. **Reference materials and methods**

This project shall include the following activities :

— exchange of information on reference materials and methods and in particular on national activities in these fields ;

— determination of the requirements for reference materials and methods ;

— characterization of materials ;

— organization of inter-laboratory comparisons ;

— joint preparation of reference materials ;

— certification of the properties of reference materials at Community level ;

— joint definition of reference methods.

2. **Management and distribution of Community reference materials**

This project comprises the following activities :

— storage and preservation of BCR reference materials in JRC laboratories and national laboratories ;

— preparation of information to be disseminated to publicize reference materials by suitable means within and outside the Community ;

— distribution of samples.

3. **Applied metrology**

This project comprises the following activities :

— inter-laboratory comparisons of secondary and transfer standards for derived units of measurement ;

— improvement of measuring techniques and their accuracy ;

— development of new measuring techniques ;

— exchange of information and of scientific personnel.

Studies and research work will be carried out under contract.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 22 October 1979

adopting a European Economic Community concerted research project on the effects of thermal processing and distribution on the quality and nutritive value of food

(79/878/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament [1],

Having regard to the opinion of the Economic and Social Committee [2],

Whereas, by virtue of Article 2 of the Treaty, the Community has as its task the promotion throughout the Community of a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology [3], the Council stressed that appropriate use should be made of the whole range of available ways and means, including concerted projects, in an effort to ensure maximum effectiveness, and that, whenever it proved necessary or desirable, non-member States, particularly European ones, should be associated in these projects;

Whereas, in its resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology [4], the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas a programme of research into food technology was proposed by the Swedish delegation to European Cooperation in the Field of Scientific and Technical Research (COST); whereas in its Decision of 16 June 1975 the Council recognized the interest to the Community of such a programme;

Whereas, by Decision 78/177/EEC [5], the Council adopted a concerted action project of the European Economic Community on the effect of processing on the physical properties of foodstuffs;

Whereas a concerted action project for Community research into food technology is likely to contribute effectively to the achievement of the abovementioned objectives, and in particular to a more economic use of national resources;

Whereas, as part of the rules and procedures applicable to their national programmes, the Member States intend to carry out the research indicated in Annex I and are prepared to integrate it into a process of coordination at Community level over a period of three years;

[1] OJ No C 140, 5. 6. 1979, p. 179.
[2] OJ No C 247, 1. 10. 1979, p. 55.
[3] OJ No C 7, 29. 1. 1974, p. 6.
[4] OJ No C 7, 29. 1. 1974, p. 2.
[5] OJ No L 54, 25. 2. 1978, p. 25.

Whereas the execution of the research work indicated in Annex I calls for a financial outlay of some eight million European units of account by the participating Member States ;

Whereas on 18 July 1978 the Council agreed on certain rules for cooperation within the COST framework ;

Whereas the Treaty does not provide the specific powers necessary for this purpose ;

Considering the opinion given by CREST on the Commission proposal,

HAS DECIDED AS FOLLOWS :

Article 1

The Community shall implement for a period of three years a concerted project on the effects of thermal processing and distribution on the quality and nutritive value of food (hereinafter referred to as 'the project').

The project shall consist in the coordination at Community level of the research work indicated in Annex I, which shall form part of the national research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

Article 3

The appropriations necessary to cover the financial contribution of the Community to the coordination, the amount of which is set at 287 000 European units of account, including the expenditure on a staff of one, shall be entered in the budget of the European Communities.

The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (1).

Article 4

In order to facilitate the execution of the project a concerted action committee on the effects of thermal processing and distribution on the quality and nutritive value of food (hereinafter called 'the Committee') shall be established.

A project leader shall be appointed by the Commission by agreement with the Committee. He shall in particular assist the Commission in its task of coordination.

The terms of reference and composition of the Committee are laid down in Annex II. The Committee shall draw up its own rules of procedure. Its secretariat shall be provided by the Commission.

Article 5

1. In accordance with a procedure to be laid down by the Commission in agreement with the Committee, the Member States participating shall regularly exchange all useful information concerning the execution of the research covered by the project. They shall provide the Commission with all information useful for coordination purposes. They shall also endeavour to provide the Commission with information on research planned or carried out in this field by bodies which are not under their authority. The information shall be treated as confidential if the Member State which provides it so requests.

2. The Commission shall draw up annual progress reports on the basis of the information provided and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period, the Commission shall, in agreement with the Committee, send to the Member States and to the European Parliament a succinct report on the performance and result of the project. The Commission shall publish this report six months after it has been sent to the Member States, except where a Member State objects. In this event, the report shall be distributed upon request only to the institutions and undertakings whose research activities justify access to the results of the research covered by the project. The Commission may make arrangements to ensure that this report remains confidential and is not disclosed to third parties.

Article 6

1. Pursuant to Article 228 of the Treaty, the Community may conclude an agreement with non-member States involved in European Cooperation in the Field of Scientific and Technical Research (COST) with a view to ensuring that the Community project and the corresponding programmes of such States are harmonized.

2. The Commission is hereby authorized to negotiate the agreement referred to in paragraph 1 in accordance with the conclusions adopted by the Council on 18 July 1978 on European Cooperation in the Field of Scientific and Technical Research (COST).

(1) OJ No L 356, 31. 12. 1977, p. 1.

Article 7

This Decision shall take effect on the day of its publication in the *Official Journal of the European Communities.*

Done at Luxembourg, 22 October 1979.

For the Council

The President

M. O'DONOGHUE

ANNEX I

Contributions by the Member States to the project by research topics

Research topic	Division of research work							
	D	B	DK	F	IRL	I	NL	UK
1. *Milk products*								
1.1. Refrigeration	×	×		×	×		×	×
1.2. Coagulation of milk proteins by heat treatment	×	×		×	×	×	×	
1.3. Analytical methodology including predictive tests	×	×		×	×	×	×	
2. *Fruit and vegetables*								
2.1. Effects of heat treatment	×	×	×	×	×	×	×	×
3. *Cereals*								
3.1. Non-traditional heat treatment	×	×		×			×	×
3.2. Effects of heat treatment on the biopolymers of cereals, especially with respect to lipid, starch and protein interreaction	×	×		×		×	×	×
3.3. Effects of freezing and thawing on the quality of cereal-based foods	×			×	×	×	×	×
4. *Fish*								
4.1. Heat treatment in relation to hitherto unused or under-used species and utilization of waste material	×	×		×		×	×	×
4.2. Heat treatment and microbiological safety	×	×		×	×	×	×	×
5. *Meat*								
5.1. Curing ingredients and their interaction in pasteurized and canned products	×			×	×	×	×	×
5.2. Chilling and freezing of meat	×		×	×	×	×	×	×
5.3. Heat-treatment processes and interactions with vegetable matter	×			×	×	×	×	×
5.4. Thawing of meat	×			×		×	×	×
6. *Nutrition*								
6.1. Heat-treatment processes and protein quality	×	×	×	×		×	×	×
6.2. Heat treatment and polyunsaturated fat	×	×	×	×		×	×	×
6.3. Nutritional consquences of the cooking of food	×	×	×	×	×	×	×	×

ANNEX II

Terms of reference and composition of the Committee

1. The Committee shall :

   1.1. contribute to the optimum implementation of the project by giving its opinion on all aspects of its progress ;

   1.2. evaluate the results and draw conclusions regarding their application ;

   1.3. be responsible for the exchange of information provided for in Article 5 (1) ;

   1.4. keep abreast of national research being carried out in the fields covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader ;

   1.6. have the right to set up a subcommittee in respect of each of the topics covered, as given in Annex I, to ensure that the project is properly implemented.

2. The reports and the opinions of the Committee shall be communicated to the Commission and the participating Member States. The Commission shall forward these opinions to CREST and to the Standing Committee on Agricultural Research.

3. The Committee shall consist of the project leader and the persons responsible for coordinating the national programmes appointed by the participating Member States.

   Members of the Committee may, for the duration of the project, be accompanied by experts, subject to a maximum of two experts per participating Member State. A member's term of office shall end before its expiry if that member dies or resigns or if the State which appointed him requests his replacement. His successor shall be appointed for the remainder of the original term of office.

COUNCIL DECISION

of 12 November 1979

adopting a multiannual research and development programme (1979 to 1982) for the European Economic Community in the field of the recycling of urban and industrial waste (secondary raw materials)

(79/968/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, pursuant to Article 2 of the Treaty, the Community has as its task the promotion throughout the Community of a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (4), the Council stressed that appropriate use should be made of the whole range of available ways and means;

Whereas it is to the Community's advantage to reduce as far as possible its dependence on third countries for its supplies of raw materials; whereas waste recovery, recyling and re-use are ways of reducing that dependence;

Whereas, on 17 May 1977, the Council of the European Communities and the Representatives of the Governments of the Member States meeting within the Council, adopted a resolution on the continuation and implementation of a European Community policy and action programme on the environment (5), which calls in particular for a campaign against waste;

Whereas a Community research programme on secondary raw materials is likely to contribute effectively to the achievement of the abovementioned aims by helping to solve technical problems arising in the use of waste;

Whereas on 19 April 1977 the European Parliament adopted a resolution on the Community's raw material supplies;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

For a four year period from 1 November 1979 the Community shall carry out a research and development programme on the recycling of urban and industrial waste (secondary raw materials) as described in Annex I.

Article 2

The appropriations necessary to implement the programme, the amount of which shall be fixed at nine million European units of account, including the expenditure covering a staff of five employees, shall be entered in the budget of the European Communities.

The European unit of account is as defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (6).

Article 3

The Commission shall ensure the implementation of the indirect actions and be responsible for the coordination of the activities the allocation of which is set out in Annex II. To assist it in these tasks, an Advisory Committee on a Multiannual Management Programme for Research and Development in Urban and Industrial Waste Recycling (secondary raw materials) (hereinafter referred to as 'the Committee') is hereby set up.

The Committee shall also assume the tasks laid down in Article 3 of Council Decision 78/384/EEC of 17

(1) OJ No C 233, 3. 10. 1978, p. 2 and OJ No C 81, 20. 3. 1979, p. 5.
(2) OJ No C 6, 8. 1. 1979, p. 23.
(3) OJ No C 128, 21. 5. 1979, p. 7.
(4) OJ No C 7, 29. 1. 1974, p. 6.
(5) OJ No C 139, 13. 6. 1977, p. 1.

(6) OJ No L 356, 31. 12. 1977, p. 1.

April 1978 adopting a multiannual research and development programme (1978 to 1980) for the European Economic Community in the field of paper and board recyling (indirect action) [1].

The terms of reference and the composition of the Committee shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management [2].

Article 4

The programme shall be reviewed at the end of the second year; this review may result in a revision of the programme during the third year in accordance with the appropriate procedures after the Committee has been consulted. The European Pariament shall be informed of the results of the review.

Article 5

The information resulting from the execution of the indirect actions in the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [3].

Article 6

1. In accordance with a procedure to be laid down by the Commission in agreement with the Committee, the Member States taking part in coordination activities and the Community shall regularly exchange all useful information concerning the execution of the research covered by such activities. The Member States shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies which are not under their authority. Any information shall be treated as confidential if so requested by the Member State which provides it.

2. The Commission shall prepare annual progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period the Commission, in agreement with the Committee, shall forward to the Member States and the European Parliament a comprehensive report on the execution and results of the coordination activities. The Commission shall publish this report six months after it has been sent to the Member States, except where a Member State objects. In that case the report shall be forwarded, with the agreement of the Committee, solely to the institutions and undertakings which so request and whose research or production activities justify access to the results of the research covered by the coordinated activities. The Commission may make arrangements to ensure that the report remains confidential and is not divulged to third parties.

Article 7

1. In accordance with Article 228 of the Treaty, the Community may conclude cooperation agreements with third countries, in particular with those taking part in European cooperation in the field of scientific and technical research (COST), with a view to their association in the programme covered by this Decision.

2. The Commission is hereby authorized to negotiate with agreements referred to in paragraph 1. The agreements with third countries taking part in COST shall be negotiated in accordance with the conclusions approved by the Council on 18 July 1978, with regard to European cooperation in the field of scientific and technical research (COST).

Done at Brussels, 12 November 1979.

For the Council

The President

J. GIBBONS

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[1] OJ No L 107, 21. 4. 1978, p. 12.
[2] OJ No C 192, 11. 8. 1977, p. 1.
[3] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX I

RESEARCH AND DEVELOPMENT PROGRAMME

Research topics	Activities to be coordinated	Indirect Actions
RESEARCH AREA I		
Sorting of household waste		
1. Assessment of waste sorting projects	×	—
2. Methods for sampling and analysis of household waste	×	—
3. Evaluation of health hazards	×	—
4. Technology for the sorting of bulk waste	×	×
5. Materials recovery		
5.1. Paper	×	×
5.2. Plastics	×	×
5.3. Non-ferrous metals	×	—
6. Energy recovery	×	×
7. New collection and transport systems	×	—
RESEARCH AREA II		
Thermal treatment of waste		
1. Firing of waste derived fuel	See I.6.	See I.6.
2. Pyrolysis and gaseification	×	×
3. Recovery of metal and glass from residue	×	—
RESEARCH AREA III		
Fermentation and hydrolysis		
1. Anaerobic digestion	×	×
2. Carbohydrate hydrolysis	×	×
3. Composting	×	—
RESEARCH AREA IV (1)		
Recovery of rubber waste		
1. Retreading	×	—
2. Size reduction	×	—
3. Reclaiming and recycling of rubber powder	×	—
4. Pyrolysis	×	—

Allocation of resources for the guidance of the Commission and the Committee for the execution of the programme :

I	45 % — 50 %
II	15 % — 25 %
III	20 % — 40 %
IV (1)	5 % — 15 %

(1) The possibility of indirect actions in this area will be reviewed in the light of experience. If such actions are decided upon the minimum allocation for research area IV will need to be raised to 10 %

ANNEX II

ACTIVITIES TO BE COORDINATED
PARTICIPATION OF THE MEMBER STATES PER RESEARCH TOPIC

Research topics	Allocation of activities to be coordinated							
	B/L	DK	D	F	IRL	I	NL	UK
RESEARCH AREA I								
Sorting of household waste								
1. Assessment of waste sorting projects	×		×		×	×	×	×
2. Methods for sampling and analysis of household waste	×	×	×	×	×	×	×	×
3. Evaluation of health hazards			×		×	×		×
4. Technology for the sorting of bulk waste	×	×	×			×	×	
4.1. Air classification				×		×		
4.2. Comminution-Liberation				×		×		×
4.3. Novel separation techniques				×		×		
5. Materials recovery						×	×	
5.1. Paper	×		×	×		×	×	
5.2. Plastics	×	×	×	×		×	×	
5.3. Non-ferrous metals	×		×	×		×	×	
6. -Energy recovery	×		×		×	×	×	
7. New collection and transport systems			×			×	×	
RESEARCH AREA II								
Thermal treatment of waste								
1. Firing of waste derived fuel	×		×		×	×	×	
2. Pyrolysis and gaseification	×		×			×	×	×
3. Recovery of metal and glass from residue	×		×	×		×	×	
RESEARCH AREA III								
Fermentation and hydrolysis								
1. Anaerobic digestion	×	×	×	×	×	×		×
2. Carbohydrate hydrolysis	×	×	×		×	×		×
3. Composting	×	×	×	×		×		×
RESEARCH AREA IV								
Recovery of rubber waste								
1. Retreading		×	×	×		×	×	
2. Size reduction			×	×		×	×	
3. Reclaiming and recycling of rubber powder			×	×		×	×	
4. Pyrolysis	×		×			×	×	

COUNCIL DECISION

of 18 December 1979

adopting a multiannual research programme of the European Economic Community in the field of climatology (indirect action, 1980 to 1984)

(80/27/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, pursuant to Article 2 of the Treaty, the Community has the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council underlined that the whole range of available ways and means should be used as appropriate, including indirect action;

Whereas economic and social structures are largely dependent on climate; whereas especially such vital resources as food and water can be seriously impaired by adverse climatic conditions; whereas man himself can contribute by his own activities, in particular by pollution of the atmosphere, to climatic instability and even to major climatic changes; whereas it is therefore in the Community's interest to promote a better knowledge of the mechanism and behaviour of climate, as well as of the possible effects of climatic variability with a view to proper planning as regards European resources;

Whereas a Community research programme in the field of climatology is likely to contribute effectively to the achievement of the abovementioned objectives;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

For a five-year period from 1 January 1980, the Community shall carry out a research programme in the field of climatology as described in the Annex hereto.

Article 2

The appropriations necessary to implement the programme, the amount of which shall be fixed at eight million European units of account, including the expenditure relating to a staff of three employees, shall be entered in the budget of the European Communities.

The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (4).

Article 3

The Commission shall be responsible for implementing the programme. It shall be assisted in this task by an Advisory Committee on Programme Management, the terms of reference and composition of which shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (5).

Article 4

During the second year the programme shall be reviewed; this review may lead to a revision of the programme during the third year, in accordance with the appropriate procedures after consultation of the Advisory Committee on Programme Management and the European Parliament.

(1) OJ No C 6, 8. 1. 1979, p. 21.
(2) OJ No C 128, 21. 5. 1979, p. 6.
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No L 356, 31. 12. 1977, p. 1.
(5) OJ No C 192, 11. 8. 1977, p. 1.

Article 5

The Council and the European Parliament shall be informed of the final results achieved and the appropriations used.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may include agreements with other States, in particular those involved in European Cooperation in the field of Scientific and Technical Research (COST) with a view to associating them with this programme.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Article 7

The information obtained from the execution of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [1].

Done at Brussels, 18 December 1979.

For the Council

The President

B. LENIHAN

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

A. RESEARCH AREAS

I. 'Understanding climate'

I.1. *Reconstruction of past climates*

Exploration and analysis of:

(a) natural records;

(b) observational and other historical records.

I.2. Climate modelling and prediction

Investigations to improve models which are capable of simulating climate, especially by including the slowly-varying components of the climatic system, and of assessing climate predictability on time and space scales that are of interest to the Community.

II. 'Man-climate interactions'

II.1. *Climate variability and European resources:*

(a) Impact on agricultural and water resources;

(b) Climatic hazards evaluation;

(c) Impact on energy requirements, use and production.

II.2. *Man's influence on climate:*

(a) Chemical pollution of the atmosphere, with special emphasis on carbon dioxide accumulation;

(b) Release of energy.

B. SERVICE ACTIVITIES

I. Interdisciplinary studies for the analysis, evaluation and application of the results of climatic research within the scope of Research Area A.II.

II. Inventory, coordination and enrichment of European climatic data sets.

Research work shall be carried out by way of contracts.

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 18 February 1980

on the implementation of a Community plan of action in the field of radioactive waste

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community,

Having regard to the draft resolution submitted by the Commission,

Whereas the Commission has submitted to the Council a communication on a Community plan of action in the field of radioactive waste;

Whereas the development of nuclear energy is intended to enable the Community to meet an increasing proportion of its electrical energy needs while at the same time ensuring availability of supplies as a result of diversification of its sources of fuel;

Whereas the foreseeable growth in the generation of electrical energy by nuclear means during the coming decades will involve corresponding waste production;

Whereas this growth must be achieved in strict compliance with the requirements of industrial and public safety and of environmental protection;

Whereas to this end the management and storage of radioactive waste must be carried out under optimum conditions;

Whereas the Council has already approved Community environment programmes and research and development programmes currently in progress in the field of management and storage of radioactive waste;

Whereas, however, the problems raised by radioactive waste constitute a combination of questions involving the perfecting of existing technologies and questions of a legal, administrative, financial and social nature which must be resolved in one and the same context;

Whereas current Community research and development work must therefore be supplemented in the manner provided for below;

Whereas, finally, collaboration with third countries and organizations in the field of management and storage of radioactive waste could benefit from an expansion of Community activities,

Approves the plan of action which forms an integral part of this resolution,

Notes that the Commission will put forward appropriate proposals for putting this plan into effect.

ANNEX

COMMUNITY PLAN OF ACTION IN THE FIELD OF RADIOACTIVE WASTE

The plan refers to the problems posed by radioactive waste from nuclear installations and in particular those concerning the management and storage of high-activity and/or long-life waste.

It runs from 1980 to 1992 and is reviewable every three years.

It is based in the first instance on the following five points:

1. **Continuous analysis of the situation with a view to adoption of the necessary solutions**

The following should be drawn up:

(a) a list of the techniques available and of installations already in existence or planned by the Member States for the processing and conditioning of waste with a view to its possible transportation and storage, together with an indication of the earliest dates on which these techniques can be applied;

(b) a list of the technological research and development work on the storage of waste which the Member States and the Community intend to carry out, and a list of the storage installations which the Member States intend to construct and put into service, having regard to the nature of the products to be stored, together, where applicable, with the relevant timetable;

(c) for the various categories of waste, a list of the management practices which have been defined or are to be defined in the Member States in accordance with the safety rules applicable in each Member State, the timetables according to which these practices should become applicable and an analysis of these timetables in the light of the dates for the application of the techniques referred to in (a);

(d) since the foregoing is not specifically concerned with permanent storage, also an inventory of the processes and procedures designed to make possible the permanent storage of radioacitve waste and, as far as possible, the estimated implementation dates and an analysis of these estimates in the light of (a), (b) and (c).

The information and results obtained from the work referred to above will be used to keep the Community and the Member States constantly up to date on work and achievements in the management and storage of radioactive waste, having regard to nuclear programme requirements.

2. **Examination at Community level of measures which could ensure the long-term or permanent storage of radioactive waste under optimum conditions**

The intensification and extension to all national programmes for the study and establishment of long-term or permanent storage sites of the present arrangements for existing concerted action and exchange of information through the current Community research and development programme.

Study, in due course, of the technical options and programmes concerning the demonstration activities of the various Member States.

Encouragement of the development of technical cooperation in the field of storage whenever such cooperation is considered to be both useful and feasible by the Member States concerned.

In general, examination of measures which could constitute the optimum solutions to long-term or permanent storage of radioactive waste.

3. **Consultation on practices concerning the management of waste, the quality and properties of conditioned waste and the conditions governing the disposal of waste**

Regular consultations should be organized in the Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste and, if necessary, between the national authorities responsible.

This should make it possible to:

— make, on the basis of the experience gained in the various Member States in the management, conditioning and storage of radioactive waste, recommendations concerning the satisfactory execution of these operations from the standpoints of safety and environmental protection; these recommendations should have an indicative character and should keep pace with developments in techniques during the plan,

— assess the feasibility and desirability of harmonizing waste management practices,

— approximate the methods of assessing the quality and properties of conditioned waste,

— seek methods of exchanging information on waste management costs,

— promote, where this is found to be advisable, consultation between the Member States under existing Community procedures on the positions to be adopted in international organizations such as the IAEA, the ISO and the NEA.

4. **Continuity of Community research and development work during the plan**

The Council undertakes to act on the new five-year research and development programme proposals (indirect action) submitted by the Commission. The Council is resolved to ensure the continuity of the research and development programmes during the plan.

The Council notes that the Commission undertakes to submit these proposals not later than one year before completion of the preceding five-year programme and to provide the necessary technical coordination between activities in the sphere of radioactive waste which take place under the JRC's programme of direct action and activities in the context of the programme of indirect action.

In particular, on 5 March 1979 the Commission submitted a second research and development programme for 1980 to 1984, to follow immediately the 1975 to 1979 programme.

5. **Providing the public with regular information**

The public must be informed of the radioactive waste situation.

In this context the Member States will continue and step up their efforts to ensure that the public receives the fullest information on their activities in the sphere of radioactive waste management and radioactive waste storage.

The Commission will do likewise as regards activities with which it is concerned.

COUNCIL RESOLUTION

of 18 February 1980

concerning the Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste

THE COUNCIL OF THE EUROPEAN COMMUNITIES

HEREBY ADOPTS THIS RESOLUTION:

1. In addition to the tasks laid down in paragraphs 2, 3, 4, 5 and 6 of the resolution of 18 July 1977 on advisory committees on research programme management, the Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste shall be given the additional task of advising the Commission in connection with implementation of the Community plan of action on radioactive waste approved by the Council in its resolution of 18 February 1980.

2. The Committee shall deliver opinions separate from those referred to in the resolution of 18 July 1977 where they are concerned with implementation of the plan; these opinions shall be prepared by the secretariat and submitted for the Committee's approval. Any member of the Committee may request that his views be recorded in these opinions. Opinions shall be forwarded to the Commission and a copy sent to the Council.

3. For the purpose of carrying out the task referred to in paragraph 1 of this resolution, and notwithstanding paragraph 7 of the resolution of 18 July 1977, the Governments of the Member States and the Commission may, if they deem it advisable, appoint up to two experts per delegation to replace the members appointed for the management of the research programme.

4. The Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste shall carry out the additional task referred to in this resolution, in accordance with the detailed rules specified, for the full duration of the Community's plan of action in the field of radioactive waste, even if its original task has been completed.

5. This resolution supplements the resolution of 18 July 1977.

COUNCIL RESOLUTION

of 18 February 1980

on the reprocessing of irradiated nuclear fuels

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having taken note of the Commission communication on the points for a Community strategy on the reprocessing of irradiated nuclear fuels, and bearing in mind that:

— the Community energy-supply situation is marked by heavy dependence upon imports of primary energy coupled with uncertain prospects for world hydrocarbon supplies,

— reprocessing makes it possible to achieve a reduction in natural uranium and enrichment requirements as a result of the recycling of uranium and plutonium in thermal and fast reactors, with the prospect of reduced dependence on outside supplies of uranium through fast breeder technology,

HEREBY RECORDS ITS AGREEMENT ON THE FOLLOWING:

1. It is in the interest of the Community and its Member States to keep open the option of recovering

and re-using spent fuel discharged from nuclear reactors, this being without prejudice to the procedures of the decision-making processes within Member States.

2. To this end, it is necessary that:

— the Member States and undertakings which, particularly with a view to enhancing the availability of energy supplies in the Community, have considered it appropriate to carry out programmes in the field of reprocessing, ensure continuity in their execution and in the studies concerned, without prejudice to the measures which they are obliged to take with regard to the detailed rules of application,

— with due regard to legal provisions and industrial arrangements already obtaining, coordination is organized amongst all interested parties to ensure that industrial reprocessing activities are carried out under the best possible conditions, from the point of view of both the undertakings carrying them out and users making use of their services,

— the Community, the Member States and the undertakings concerned persevere in the efforts made to ensure that these activities remain compatible throughout their industrial development with the objectives of public safety, environmental protection and non-diversion of nuclear materials from the intended uses declared by the users.

COUNCIL RESOLUTION

of 18 February 1980

on fast breeder reactors

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

has studied the Commission communication on the fast breeder option in the Community context — justification, achievements, problems and action perspectives, and in view of the fact that:

(a) the Community energy-supply situation is marked by heavy dependence on imported primary energy coupled with very uncertain prospects for world hydrocarbon supplies;

(b) the fast breeder reactor could play an important role in the Community's energy supplies by helping to reduce gradually its dependence on imported uranium and by contributing to the improvement of its balance of payments;

(c) efforts have already been made and results already been achieved as a result also of the collaboration agreements existing between Member States of the Community with a view to the development of this family of reactors;

HAS RECORDED ITS AGREEMENT ON THE FOLLOWING:

— it is in the interest of the Community and of its Member States to keep open the option of making fast breeder reactors available to energy producers on a commercial basis within a period which takes due account of energy requirements in the Community, this being without prejudice to the procedures of the decision-making processes in the Member States,

— the Member States and the undertakings which have considered it appropriate, particularly with a view to enhancing the availability of energy supplies in the Community, to carry out programmes in the field of fast breeder reactors will ensure continuity in their execution and in the studies concerned, including those concerning the fuel cycle, without prejudice to the measures which they are obliged to take with regard to the detailed rules of application and will continue their efforts to ensure that the performance of this reactor system provides at all times adequate guarantees in accordance with the provisions

concerning safety, radiation protection and protection of the environment,

— the Community will lend its support to the achievement of the abovementioned objectives. Any new form which that support might take and the detailed arrangements for its practical implementation will be decided upon by the Council on the basis of proposals from the Commission.

Work on the gradual harmonization of safety codes and measures will be continued in the Coordinating Committee for Fast Reactors.

The public must be informed of the situation in the field of fast breeder reactors.

In this context the Member States will continue and step up their efforts to ensure that the public receives the fullest information on their activities in the field of fast breeder reactors.

The Commission will do likewise as regards activities with which it is concerned.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 13 March 1980

adopting a research programme to be implemented by the Joint Research Centre for the European Atomic Energy Community and for the European Economic Community (1980 to 1983)

(80/317/EEC, Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1) presented after consultation, with regard to nuclear projects, of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, in the context of the common policy relating to the field of science and technology, the multiannual research programme is one of the principal means whereby the European Atomic Energy Community can contribute to the safety and development of nuclear energy and to the acquisition and the dissemination of information in the nuclear field;

Whereas Article 2 of the Treaty establishing the European Economic Community assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an increase in stability; whereas the objectives pursued by the Community's activities to this end are set out in Article 3 of the said Treaty;

Whereas the non-nuclear projects provided for by this Decision appear necessary for the attainment of these objectives;

Whereas the Treaty establishing the European Economic Community has not provided the specific powers required for this purpose;

Whereas on 14 January 1974 the Council adopted a resolution concerning the coordination of national policies and the definition of Community actions in the field of science and technology (4);

Whereas the programme was drawn up in accordance with the Council resolution of 17 December 1970 concerning the procedures for adopting research and training programmes (5);

Whereas the Italian Government has undertaken to take over until 31 December 1980 the Essor complex, made available to it by the Commission, within the meaning of Article 6 (c) of the Treaty establishing the European Atomic Energy Community;

Whereas it is in the common interest to further experiments in reactor safety, and the Essor plant may be utilized to this end;

(1) OJ No C 110, 3. 5. 1979, p. 4.
(2) OJ No C 140, 5. 6. 1979, p. 83.
(3) OJ No C 297, 28. 11. 1979, p. 9.
(4) OJ No C 7, 29. 1. 1974, p. 2.
(5) OJ No L 16, 20. 1. 1971, p. 13.

Whereas Article 3 of Decision 77/488/EEC, Euratom [1] provides for a review of the programme during its third year which may lead to the adoption of a new four-year programme (1980 to 1983) with 1980 constituting a year common to both programmes; whereas Decision 77/488/EEC, Euratom, should therefore be repealed;

Whereas, as a result of such repeal, 100 million European units of account assigned to the preceding programme will remain available; whereas this amount should be assigned to the new programme; whereas such a step must be taken into account in determining the level of expenditure commitments necessary for the execution of the new programme,

HAS DECIDED AS FOLLOWS:

Article 1

A research programme, as presented in Annexes A, B and C, is hereby adopted for a period of four years, as from 1 January 1980.

Article 2

The total expenditure commitments necessary to implement the programme defined in Annex A and the maximum number of staff are fixed at 510·87 million European units of account, including the amounts referred to in the second paragraph of Article 6, and 2 260 respectively. The indicative breakdown of funds and staff is given in Annex B. A scale of financial contributions from the Member States for the supplementary research and training programme of the European Atomic Energy Community is set out in Annex C.

The European unit of account shall be that defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities [2].

Article 3

The programme shall be reviewed during its third year. Such review may lead to a Council Decision on a new four-year programme in accordance with the appropriate procedure.

Article 4

The dissemination of the information resulting from the implementation of the non-nuclear parts of the programme shall be carried out in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [3].

Article 5

The Commission shall be responsible for implementation of the programme and, to this end, shall call upon the services of the Joint Research Centre.

Article 6

Decision 77/488/EEC, Euratom, is hereby repealed with effect from 1 January 1980.

However, amounts which are authorized pursuant to the aforementioned Decision under the relevant headings in the 1977, 1978, 1979 and 1980 budgets, and which on 1 January 1980 have not yet been committed or which have been committed but not yet paid, may be used for the execution of the present programme.

Done at Brussels, 13 March 1980.

For the Council

The President

G. ZAMBERLETTI

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[1] OJ No L 200, 8. 8. 1977, p. 4.
[2] OJ No L 356, 31. 12. 1977, p. 1.
[3] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX A

RESEARCH PROGRAMME (1980 to 1983)

A. NUCLEAR SAFETY AND THE FUEL CYCLE (JOINT PROGRAMME)

A.1. **Reactor safety** (nuclear activity)

The programme consists of the following 11 projects:

— project LOBI: study of loss of coolant accidents in light-water reactors,

— project Super-SARA: an in-pile experiment on the behaviour of light-water reactor fuel in the event of loss of coolant,

— project LWR primary circuit integrity: early detection of faults in light-water reactor vessels,

— fast-breeder fuel sub-assembly thermohydraulics,

— mechanical tests of fast-breeder structural materials,

— development of fast-breeder hypothetical accident codes,

— project PAHR: study of the evacuation of residual heat in a fast-breeder molten core,

— project PAHR in-pile,

— study of fuel-coolant interaction under accident conditions,

— study of the behaviour of structures and containments subjected to accidental stresses,

— analysis of reliability, risk assessment and data bank.

A.2. **Plutonium fuels and actinide research** (nuclear activity)

The programme consists of the following three projects:

— utilization limits of plutonium fuels,

— safety of actinide cycle,

— actinide research.

A.3. **Safety of nuclear materials** (nuclear activity)

The programme consists of the following four projects:

— risk evaluation,

— protective barriers,

— actinide separation,

— actinide monitoring.

A.4. **Fissile materials control and management** (nuclear activity)

The programme consists of the following four projects:

— acquisition of data on accountancy and materials balance evaluation,

— development of measurement methods and instrumentation and of methods for the evaluation of the isotopic composition of irradiated fuels,

— containment and surveillance techniques,

— study of safeguards systems for the fuel cycle as a whole.

B. NEW ENERGIES (JOINT PROGRAMME)

B.1. **Solar energy** (non-nuclear activity)

The programme consists of the following four projects:

— European solar test installation (ESTI),

— solar energy for habitat and low-temperature applications,

— solar power plant materials,

— photo-electrochemical and photo-chemical conversion.

B.2. **Hydrogen production, energy storage and transport** (non-nuclear activity)

The programme consists of the following three projects :

— thermochemical production of hydrogen,
— advanced studies on energy carriers,
— systems studies.

B.3. **Thermonuclear fusion technology** (nuclear activity)

The programme consists of the following five projects :

— conceptual studies on fusion reactors,
— blanket technology studies,
— studies on structural materials,
— studies on advanced materials,
— operation of the cyclotron.

B.4. **High-temperature materials** (nuclear activity)

The programme consists of the following three projects :

— high-temperature materials information centre,
— materials and engineering studies,
— high-temperature materials data bank.

C. STUDY AND PROTECTION OF THE ENVIRONMENT (JOINT PROGRAMME)

C.1. **Protection of the environment** (non-nuclear activity)

The programme consists of the following six projects :

— project Ecdin,
— exposure to chemical products, in particular indoor pollution and organic substances,
— analysis of air quality,
— analysis of water quality,
— heavy metals pollution and health effects,
— environmental impact of conventional power plants.

C.2. **Remote sensing from space** (non-nuclear activity)

The programme consists of the following two projects :

— agriculture,
— protection of the sea.

D. NUCLEAR MEASUREMENTS (JOINT PROGRAMME)

D.1. **Nuclear measurements** (nuclear activity)

The programme consists of the following two projects :

— measurement of nuclear data,
— nuclear reference materials and techniques.

E. SPECIFIC SUPPORT FOR THE COMMISSION'S SECTORAL ACTIVITIES (JOINT PROGRAMME)

E.1. **Informaties** (nuclear activity)

The programme consists of the following three projects :

— data communication,
— Eurocopi,
— European shielding information service (ESIS).

E.2. **Support to safeguards** (nuclear activity)

E.3. **Support to the Community Bureau of References** (non-nuclear activity)

E.4. **Training and education** (nuclear and non-nuclear activity)

E.5. **Utilization of research results** (nuclear and non-nuclear activity)

E.6. **Provision of scientific and technical services** (nuclear and non-nuclear activity)

F. OPERATION OF LARGE-SCALE INSTALLATIONS

Supplementary programme

F.1. **Operation of the HFR reactor** (nuclear activity)

ANNEX B

INDICATIVE BREAKDOWN OF STAFF AND FUNDS

Programmes	Expenditure commitments (million EUA)	Total staff	of which research staff
A. NUCLEAR SAFETY AND THE FUEL CYCLE			
1. Reactor safety	151·30 (1) (2)	716	308
2. Plutonium fuels and actinide research	56·35	207	117
3. Safety of nuclear materials	20·85	115	52
4. Fissile materials control and management	20·50	112	55
Total	249·00	1 150	532
B. NEW ENERGIES			
1. Solar energy	22·90	117	60
2. Hydrogen production, energy storage and transport	14·10	79	40
3. Thermonuclear fusion technology	26·10	124	60
4. High-temperature materials	14·90	63	38
Total	78·00	383	198
C. STUDY AND PROTECTION OF THE ENVIRONMENT			
1. Protection of the environment	33·90	174	90
2. Remote sensing from space	18·35	97	50
Total	52·25	271	140
D. NUCLEAR MEASUREMENTS	43·20	184	108
E. SPECIFIC SUPPORT TO THE COMMISSION			
1. Informatics	13·83	69	34
2. Support to safeguards	5·90	25	13
3. Support to the Community Bureau of References	2·62	13	7
4. Training and education	3·31	17	9
5. Utilization of research results	1·74	8	1
6. Provision of scientific and technical services	8·80	52	27
Total	36·20	184	91
SUB-TOTAL	458·65		
F. OPERATION OF LARGE-SCALE INSTALLATIONS			
1. Operation of the HFR reactor	52·22	88	41
GRAND TOTAL	510·87 (1) (2)	2 260 (3)	1 110

(1) Including a provisional amount of 6 770 000 EUA reserved for the PAHR in-pile project.

(2) Including a provisional amount of 40 610 000 EUA for the second phase of the Super-SARA project.

(3) A maximum of 20 staff is added to this figure in 1980 only corresponding to the decrease in Centre staff provided for in Decision 77/488/EEC, Euratom.

ANNEX C

SCALE OF FINANCIAL CONTRIBUTIONS FROM THE MEMBER STATES FOR THE EURATOM SUPPLEMENTARY RESEARCH AND TRAINING PROGRAMME

Flat-rate scale

Operation and utilization of the HFR reactor:

— Federal Republic of Germany:	50 %,
— Netherlands:	50 %.

COUNCIL DECISION

of 13 March 1980

adopting a research and training programme (1979 to 1983) for the European Atomic Energy Community in the field of controlled thermonuclear fusion

(80/318/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Haing regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas in its Decision 76/345/Euratom (3), as amended by Decision 78/470/Euratom (4), the Council adopted a research and training programme (1976 to 1980) in the field of fusion and plasma physics; whereas Article 3 of that Decision provides that the Commission will submit to the Council in 1978 a review proposal designed to replace the 1976 to 1980 programme with a new five-year programme (1979 to 1983) with 1979 and 1980 constituting years common to both programmes; whereas Decisions 76/345/Euratom and 78/470/Euratom should therefore be repealed;

Whereas, as a result of such repeal, 44 million European units of account assigned to the preceding programme, exclusive of JET, and 86·40 million European units of account assigned to the preceding programme for the JET project will remain available; whereas these amounts shall be assigned to the new programme; whereas such a step must be taken into account in determining the upper limit for expenditure commitments necessary for the execution of the new programme;

Whereas, in view of the considerable efforts needed to reach the application stage of controlled thermonuclear fusion, which could be of benefit to the Community, particularly in the wider context of the security of its long-term energy supplies, the various stages of development of the work hitherto undertaken in this field should continue on a joint basis;

Whereas the scientific progress achieved in this field in recent years in the Community and the rest of the world illustrates the need, particularly for Tokamak systems, to construct larger and more complex devices and to concentrate, in particular, on the development of plasma heating techniques and the study of certain technological problems with the collaboration of the JRC;

Whereas it is necessary to equip the Community with a large Tokamak machine (JET: Joint European Torus);

Whereas the research proposed by the Commission constitutes an appropriate means of pursuing such action, and it is consequently in the common interest to adopt a multiannual programme in the field of controlled thermonuclear fusion, the existence of which is moreover a necessary condition for Community participation in strengthening world cooperation in this field;

Whereas it is important that the Community should continue to encourage both the construction of certain equipment having a bearing on projects accorded priority status, by granting a preferential participation rate for expenditure on such equipment, and the implementation of major projects carried out jointly by all or some of the associated laboratories;

Whereas, furthermore, the mobility of staff between organizations cooperating in the execution of the programme should be promoted,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of controlled thermonuclear fusion as defined in the Annex is hereby adopted for a five-year period as from 1 January 1979.

(1) OJ No C 93, 9. 4. 1979, p. 69.
(2) OJ No C 171, 9. 7. 1979, p. 38.
(3) OJ No L 90, 3. 4. 1976, p. 12.
(4) OJ No L 151, 7. 6. 1978, p. 8.

Article 2

The upper limit for expenditure commitments and the maximum number of staff for the programme exclusive of JET are fixed at 190·50 million European units of account, including a minimum of 44 million European units of account from the amounts referred to in the second paragraph of Article 4, and 113 employees for the whole duration of the programme.

The upper limit for expenditure commitments and the maximum number of staff for the construction phase of the JET project, as regards its basic performance, during the duration of the programme are fixed at 145 million European units of account including a minimum of 86·40 million European units of account from the amounts referred to in the second paragraph of Article 4, and 150 temporary employees within the meaning of Article 2 (a) of the conditions of employment of other servants of the European Communities.

The European unit of account shall be that defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (1).

Article 3

The Commission shall submit to the Council, not later than 1 July 1981, a review proposal designed to replace the present programme by a new five-year programme with effect from 1 January 1982.

Article 4

Decisions 76/345/Euratom and 78/470/Euratom are hereby repealed with effect from 1 January 1979.

However, amounts which, pursuant to the aforementioned Decisions, are authorized under the relevant headings of the 1976, 1977, 1978, 1979 and 1980 budgets and which on 1 January 1979 have not yet been committed, or which have been committed but not yet paid, may be used for the execution of the present programme.

Done at Brussels, 13 March 1980.

For the Council

The President

G. ZAMBERLETTI

(1) OJ No L 356, 31. 12. 1977, p. 1.

ANNEX

CONTROLLED THERMONUCLEAR FUSION

1. The subject matter of the programme to be executed shall be :

   (a) plasma physics in the sector concerned, in particular studies of a basic character or relating to confinement with suitable devices and to methods for producing and heating plasma ;

   (b) research into the confinement, in closed configurations, of plasma of widely varying density and temperature, if possible attaining ignition conditions ;

   (c) research into light-matter interactions and transport phenomena and the development of high-power lasers ;

   (d) the development and application to confinement devices of sufficient powerful plasma heating methods ;

   (e) improvement of diagnostic methods ;

   (f) study of technological problems connected with current research and problems relating to the use of thermonuclear reactions ;

   (g) implementation of the JET project.

   The work referred to in (a), (b), (c), (d), (e) and (f) shall be carried out by means of association or limited duration contracts which are designed to yield the results necessary for implementation of the programme and which take into consideration the work carried out by the JRC, in particular in relation to the technology referred to in (f).

   The implementation of the JET project referred to in (g) has been entrusted to the Joint European Torus (JET), joint undertaking, established by Decision 78/471/Euratom [1].

2. The programme set out in point 1 shall be part of a long-term cooperative project embracing all work carried out in the Member States in the field of controlled thermonuclear fusion. It is designed to lead in due course to the joint construction of prototypes with a view to their industrial production and marketing.

3. For the duration of the programme exclusive of JET a maximum amount of 190·50 million European units of account and a maximum number of 113 employees shall be allocated for this purpose. The amount in question is intended to cover :

   — expenditure on equipment having a bearing on operations accorded priority status and some expenditure in support of JET,

   — staff mobility costs,

   — other expenditure relating to operations to be carried out under the programme exclusive of JET.

4. The appropriation allocated to the programme exclusive of JET can be broken down as follows :

   (a) about 30 % for financing projects at a preferential rate, as specified in paragraph 5 ;

   (b) about 4 % for administration costs and for expenditure intended to ensure the mobility of staff to enable them to work in organizations cooperating in the implementation of the programme ;

   (c) the amount not set aside for the operations and expenditure referred to in (a) and (b) and any positive balance from the contributions of associated third countries under the programme, exclusive of JET, shall be used for financial participation by the Community in other expenditure incurred by the associations. This Community participation in other association expenditure relating to the joint programme shall be at a uniform rate of about 25 %.

[1] OJ No L 151, 7. 6. 1978, p. 10.

5. After a technical examination, the Consultative Committee of the Fusion Programme may, as soon as it has been set up, accord priority status to projects belonging to one of the following areas :

   — Tokamak systems and support for JET,
   — other toroidal machines,
   — heating and injection, including support for JET in this field,
   — Fusion technology,
   — the work referred to in paragraph 1 (c).

   The Commission may finance these projects at a uniform preferential rate of about 45 %. In return, all the members of associations shall have the right to take part in the experiments carried out with the equipment thus constructed.

6. The upper limit for expenditure commitments and the maximum number of staff for the construction phase of the JET project, as regards its basic performance, during the programme period are fixed at 145 million European units of account and 150 temporary staff. The amount in question is intended to finance the construction phase of the JET project at a participation rate of 80 %. The Swedish and Swiss contributions to the JET project shall be deducted directly from the financing of that part of the overall budget laid down for the project which is to be borne by the Community budget.

COUNCIL DECISION

of 18 March 1980

adopting a research and training programme (1980 to 1984) for the European Atomic Energy Community in the field of biology—health protection (Radiation Protection Programme)

(80/342/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission (1), submitted after consulting the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas it is in the interest of the Community to supplement, broaden and deepen the information necessary for an objective evaluation of the effects of and the hazards arising from ionizing radiation, in order to guarantee adequate protection of man and the environment;

Whereas scientific collaboration, the exchange of information and mobility or interchange of scientists at Community level are essential to radiation protection;

Whereas the progress of knowledge, the new concepts in radiation protection and the need for managerial improvement call for the replacement of the present 1976 to 1980 programme with a new 1980 to 1984 programme, with 1980 as an overlapping year; whereas Decision 76/309/Euratom (4) should therefore be repealed;

Whereas, as a result of such repeal, some 10 MEUA assigned to the preceding programme will remain available; whereas this amount should be assigned to the new programme; whereas such a step must be taken into account in determining the upper limit for expenditure commitments necessary for the execution of the new programme;

Whereas the research covered by this Decision is an appropriate way of pursuing such action; whereas it is therefore in the common interest to adopt a multiannual programme in the field of radiation protection,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of radiation protection as defined in the Annex is hereby adopted for a five-year period beginning 1 January 1980.

Article 2

The under limit for expenditure commitments and the number of staff necessary for the execution of the programme shall be 59 million European units of account, including the amounts referred to in Article 5 (2), and 64 staff respectively.

The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (5).

Article 3

The Commission shall be responsible for the continuous supervision of the implementation of the programme in order to ensure that real coordination has been achieved and to decide whether developments in the situation or unforeseen research results necessitate changes to the programme. To this end it will report to the Council and to the European Parliament at the end of the third year of the programme and will propose, where appropriate, any amendments necessary. These amendments may lead to a revision of the programme in the course of the fourth year in accordance with the appropriate procedures and after the Advisory Committee on Programme Management has been consulted.

Article 4

The Commission shall be assisted by the Advisory Committee on Programme Management for Radiation Protection, the terms of reference and composition of

(1) OJ No C 102, 24. 4. 1979, p. 4.
(2) OJ No C 34, 11. 2. 1980, p. 101.
(3) OJ No C 297, 28. 11. 1979, p. 19.
(4) OJ No L 74, 20. 3. 1976, p. 32.
(5) OJ No L 356, 31. 12. 1977, p. 1.

which were defined in the Council resolution of 18 July 1977 on advisory committees on research programme management (1).

Article 5

Decision 76/309/Euratom is hereby repealed with effect from 1 January 1980.

However, amounts which are authorized under the relevant headings in the 1976, 1977, 1978, 1979 and 1980 budgets and which, as at 1 January 1980, have not yet been committed or have been committed but not yet paid may be used for the execution of the present programme.

Done at Brussels, 18 March 1980.

For the Council

The President

A. RUFFINI

(1) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

RADIATION PROTECTION PROGRAMME

(indirect action)

The aim of the programme is, through a cooperative European effort, to increase knowledge in radiation protectiion while taking into account particular problems and skills available in Europe. It is designed to improve the understanding and control of the ionizing radiation risks encountered, with two main objectives :

— improvement of scientific and technical knowledge with a view to updating basic standards for the health protection of the general public and workers against the hazards arising from ionizing radiation,

— evaluation of the biological and ecological consequences of nuclear activities and of the use of nuclear energy and ionizing radiation, in order to ensure adequate protection of man and of the environment whenever unacceptable harm could be caused to them.

The programme will cover six major areas :

— radiation dosimetry and its interpretation,
— behaviour and control of radionuclides in the environment,
— short-term somatic effects of ionizing radiation,
— late somatic effects of ionizing radiation,
— genetic effects of ionizing radiation,
— evaluation of radiation hazards.

The activities will be carried out mainly under research contracts and partly by the Commission's Biology Group set up at the Ispra establishment.

COUNCIL DECISION

of 18 March 1980

adopting a programme on the management and storage of radioactive waste (1980 to 1984)

(80/343/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal submitted by the Commission (1) after consulting the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas the use of nuclear energy inevitably involves the production of radioactive waste; whereas it is therefore essential to implement effective solutions to guarantee the safety and protection of populations and the environment against the potential risks associated with the management of such waste;

Whereas the programme of action of the European Communities on the environment, which was approved by the Council of the European Communities and the Representatives of the Governments of the Member States meeting in the Council in the Declaration of 22 November 1973 (4), and of which the continuation of implementation are contained in the resolution of 17 May 1977 (5), underlines the need for Community action on the handling and storage of radioactive waste, and specifies the content of and procedures for implementing such action;

Whereas the particular nature of the waste is such as to require monitoring of its potential effects and reinforcement of the projects and research activities undertaken to ensure the protection of the environment;

Whereas the programme on the management and storage of radioactive waste adopted by Decision 75/406/Euratom (6) has yielded positive results and opened up encouraging prospects of attaining the desired objectives,

HAS DECIDED AS FOLLOWS:

Article 1

A programme on the management and storage of radioactive waste, as defined in the Annex, is hereby adopted for a five-year period beginning 1 January 1980.

Article 2

The upper limit for expenditure commitments and the number of staff necessary for the execution of the programme shall be 43 million European units of account and 10 staff respectively for the duration of the programme. The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (7).

Article 3

The programme shall be reviewed at the end of the second year. This review may lead to a revision of the programme in the course of the third year in accordance with the appropriate procedures and after the Advisory Committee on Programme Management has been consulted.

Article 4

The Commission shall be responsible for implementing the programme. It shall be assisted in this task by the Advisory Committee on Programme Management for the Management and Storage of Radioactive Waste, the terms of reference and composition of which were defined in the Council resolution of 18 July 1977 on advisory committees on research programme management (8).

Done at Brussels, 18 March 1980.

For the Council

The President

A. RUFFINI

(1) OJ No C 80, 27. 3. 1979, p. 9.
(2) OJ No C 59, 10. 3. 1980, p. 16.
(3) OJ No C 227, 10. 9. 1979, p. 27.
(4) OJ No C 112. 20. 12. 1973, p. 1.
(5) OJ No C 139, 13. 6. 1977, p. 1.
(6) OJ No L 178, 9. 7. 1975, p. 28.
(7) OJ No L 356, 31. 12. 1977, p. 1.
(8) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

The aim of the programme is to further the joint development and perfecting of a system of management of the radioactive waste produced by the nuclear industry and to ensure, at the various stages, the best possible protection of the public and the environment.

The programme will cover :

(a) work to solve certain technological problems involved in the processing, storage and disposal of radioactive waste.

Processing :

— immobilization of low- and medium-activity waste ; development of processes and operation of pilot installations,

— conditioning of high-activity waste : fuel claddings and residues from dissolvers,

— processing of medium-activity liquid waste,

— processing of waste contaminated by alpha emitters,

— examination and evaluation of high-activity solidified waste,

— immobilization and storage of gaseous waste.

Storage and disposal :

— burial of low-activity solid waste at shallow depth,

— storage and disposal in geological formations ;

(b) work to define the general framework for the projects relating to the storage and disposal of radioactive waste :

— evaluation of processes, criteria for the launching of experiments and strategies for waste management,

— studies of the legal, administrative and financial aspects of waste management.

The work described in (a) and (b) will be carried out mainly under contract.

COUNCIL DECISION

of 18 March 1980

adopting a second research programme in the field of medical and public health research, consisting of four multiannual concerted projects

(80/344/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas pursuant to Article 2 of the Treaty, the Community has been assigned the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas by Decisions 78/167/EEC (4), 78/168/EEC (5) and 78/169/EEC (6), the Council has adopted three concerted projects as a first research programme in the field of medical and public health research;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (7) the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted projects and that whenever it proves necessary or desirable that non-Member States, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, in its resolution of 14 January 1974 (8) relating in particular to the coordination of national policies in the field of science and technology, the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (Crest);

Whereas the Community concerted projects in the sector of medical and public health research are necessary to attain in the course of the operation of the common market the objectives of the Community as regards the harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living, account being taken in particular of potential economic and industrial development within the fields covered by the research projects;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I, and are prepared to integrate such research into a process of coordination at Community level over periods of three or four years;

Whereas the execution of such research as described in the aforesaid Annex will require a financial contribution of about 35 million European units of account from the Member States;

Whereas the Community is empowered to conclude Agreements with non-member States in the fields covered by this Decision; whereas it may prove advisable to associate the non-member States participating in European Cooperation in the Field of Scientific and Technical Research (COST) within the concerted projects covered by this Decision, in accordance with the conclusions approved by the Council on 18 July 1978 in connection with such cooperation; whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of such Agreements, and on the other hand, negotiations should be opened with the non-member States, as soon as this Decision is adopted;

Whereas the Treaty has not provided the specific powers for this purpose;

Whereas Crest has given its opinion on the Commission proposal,

(1) OJ No C 213, 7. 9. 1978, p. 3.
(2) OJ No C 296, 11. 12. 1978, p. 33.
(3) OJ No C 105, 26. 4. 1979, p. 22.
(4) OJ No L 52, 23. 2. 1978, p. 20.
(5) OJ No L 52, 23. 2. 1978, p. 24.
(6) OJ No L 52, 23. 2. 1978, p. 28.
(7) OJ No C 7, 29. 1. 1974, p. 6.
(8) OJ No C 7, 29. 1. 1974, p. 2.

HAS DECIDED AS FOLLOWS:

Article 1

In the field of medical and public health research, the Community shall implement four concerted projects, hereinafter referred to as 'the projects', for the periods indicated, in the fields of:

1. The detection of the tendency to thrombosis	4 years
2. The understanding, evaluation and treatment of hearing impairment	3 years
3. Criteria for perinatal monitoring	4 years
4. Common standards for quantitative electrocardiography	4 years

The projects shall consist in coordination at Community level of the research described in Annex I, which form part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

Article 3

The appropriations necessary to finance the Community contribution to the coordination, the amount of which shall be fixed at 2·32 million European units of account, including the expenditure relating to a staff of four officials, shall be entered in the budget of the European Communities.

The European unit of account is defined in Article 10 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (1).

Article 4

To facilitate the execution of the four projects, a Concerted Action Committee, hereinafter referred to as 'the Committee', shall be established for each project.

For each project, a project leader shall be appointed by the Commission, by agreement with the respective Committee. He shall, in particular, assist the Commission in its coordinating action.

The terms of reference and the composition of these Committees are defined in Annex II.

Each Committee shall draw up its rules of procedure. Its secretariat shall be provided by the Commission.

Article 5

In accordance with a procedure to be adopted by the Commission by agreement with the respective Committees, the Member States participating in the projects shall regularly exchange all useful information concerning the execution of the research covered by each project and forward to the Commission all information which may be useful for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies for which they are not responsible. This information shall be treated as confidential if so requested by the Member State which provides it.

The Commission shall prepare yearly progress reports on the basis of the information supplied and shall forward them to the Member States and to the European Parliament.

At the end of the coordination period, the Commission shall, by agreement with the respective Committees, forward to the Member States and to the European Parliament a general report on the execution and results of the projects particularly so that the results obtained may be accessible as completely and rapidly as possible to the enterprises, institutions and other parties particularly concerned at the social level. The Commission shall publish this report six months after it has been forwarded to the Member States, unless a Member State objects. In this case, the report shall be distributed at their request, solely to institutions and enterprises whose research and production activities justify access to the results of the research carried out under each project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

1. In accordance with Article 228 of the Treaty, the Community may conclude Agreements with the non-Member States participating in European Cooperation in the field of Scientific and Technical Research (COST) with a view to associating them with the projects.

2. The Commission is hereby authorized to negotiate the Agreements referred to in paragraph 1.

Article 7

This Decision shall take effect on 1 June 1980.

Done at Brussels, 18 March 1980.

For the Council

The President

A. RUFFINI

(1) OJ No L 356, 31. 12. 1977, p. 1.

ANNEX I

PROJECTS IN THE FIELD OF MEDICAL AND PUBLIC HEALTH RESEARCH

I. Implementation and coordination of the national contributions to the projects

The following authorities carrying out medical research in the participating Member States will ensure the implementation of the national contributions to the projects indicated in Sections II to V, as well as their coordination at national level:

Belgium:	FRSM — Fonds de la recherche scientifique medicale, Bruxelles FGWO — Fonds voor Geneeskundig Wetenschappelijk Onderzoek, Brussel
Denmark:	Statens lægevidenskabelige Forskningsråd, København
Germany:	The abovementioned projects will be provisionally carried out by the following institutes until the appointment of the national coordinator responsible: Project No 1: — Zentrum für Innere Medizin der Universität Gießen — Department für Innere Medizin der Universität Ulm Project No 2: — Institut für Physiologie u. Biokybernetik der Universitat Erlangen-Nürnberg — Hals-, Nasen und Ohrenklinik der Universitat Münster Project No 3: — Frauenklinik der Universität Düsseldorf Project No 4: — Abtlg. Innere Medizin I der RWTH Aachen — Department für Biometrie u. med. Informatik der Mediz. Hochschule Hannover
France:	INSERM — Institut national de la sante et de la recherche médicale, Paris
Ireland:	Medical Research Council of Ireland, Dublin
Italy:	CNR — Consiglio nazionale della ricerca, Roma and Istituto superiore di sanità, Roma
Netherlands:	Gezondheidsorganisatie TNO and Stichting Medisch Wetenschappelijk Onderzoek FUNGO, Den Haag
United Kingdom:	MRC — Medical Research Council, London

II. Project relating to the detection of the tendency to thrombosis (project No 1, four years)

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics:

1. Detection of activated clotting factors and of their reaction products.
2. Quantitative analysis of the inhibitors of the clotting system.
3. Studies of the active and inhibitory components of the fibrinolytic system.
4. Studies of blood platelets.
5. Pilot studies in well-defined populations following standardization of materials and methodology.

Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands and the United Kingdom will contribute research under the topics mentioned above.

III. **Project relating to the understanding, evaluation and treatment of hearing impairment (Project No 2, three years)**

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics :

1. Comparative studies of the relationships between histopathological, functional and clinical data in cases of perceptive hearing losses.
2. Development and/or improvement of electrophysiological auditory function tests.
3. Improvement of artificial auditory stimulation.
4. Mathematical modelling of normal and impaired auditory systems.

Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands and the United Kingdom will contribute research under the topics mentioned above.

IV. **Project relating to criteria for perinatal monitoring (project No 3, four years)**

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics :

1. Definition of specific high-risk groups for perinatal monitoring.
2. Evaluation and improvement of existing processing techniques and methods for monitoring.
3. Drawing up common quantitative methods to define the neonatal condition.
4. Studies of the correlations between neonatal conditions and relevant perinatal parameters obtained during labour ; establishment of common criteria for perinatal monitoring.

Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands and the United Kingdom will contribute research under the topics mentioned above.

V. **Project relating to common standards for quantitative electrocardiography (project No 4, four years)**

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics :

1. Standardization of ECG measuring procedures in quantitative (computer) terms ; comparative studies of measurements performed by different programmes ; drawing up of guidelines and definition of common standards for measurement.
2. Standardization of the diagnostic criteria and of the algorhythmic documentation of their operation.
3. Establishment of a modest pilot library of ECG's.

Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands and the United Kingdom will contribute research under the topics mentioned above.

ANNEX II

TERMS OF REFERENCE AND COMPOSITION OF THE COMMITTEE

1. The Committee shall :

   1.1. contribute to the optimum execution of the project by giving its opinion on all of its aspects ;

   1.2. evaluate the results and draw conclusions as regards their application ;

   1.3. be responsible for the exchange of information referred to in the first subparagraph of Article 5 ;

   1.4. keep abreast of national research being done in the fields covered by the project ; and more especially of scientific and technical developments likely to affect the execution of the project ;

   1.5. suggest guidelines to the project leader.

2. The Committee's reports and opinions shall be forwarded to the Commission and to the Member States participating in the project. The Commission shall forward these opinions to Crest.

3. The Committee shall be composed of persons responsible for coordinating the national contributions to the project and the project leader. Each member may be accompanied by experts.

MEDIUM-TERM GUIDELINES FOR TECHNICAL COAL RESEARCH (1981 to 1985)

(under Article 55 (2) (c) of the ECSC Treaty

PREAMBLE

All enterprises, research institutes and individual persons wishing to engage in research within the meaning of Article 55 of the ECSC Treaty may make application to the Commission of the European Communities for the grant of financial assistance.

Such applications must relate to fields of research specified in the medium-term guidelines for technical coal research reproduced in this communication. Upon receipt, applications will undergo selection by the Commission, which will bear in mind the need to ensure that financial expenditure is concentrated upon research projects which best satisfy the criteria of these medium-term guidelines.

Applications should be submitted before 1 September each year in order to be effective in the following year.

The procedure applicable to the lodging and consideration of applications, the terms and conditions of aid, and the obligations of the beneficiary as regards protection and dissemination of research results are laid down in a communication published by the Commission (1).

* * *

Article 55 of the Treaty concerning the establishment of the European Coal and Steel Community specifies that the Commission of the European Communities shall promote technical and economic research relating to the production and increased use of coal and to occupational safety in the coal industry.

Having, in conformity with the Treaty, laid the foundations of collaboration between research workers and coalmining undertakings in the Community countries by providing the necessary contacts, the High Authority of the ECSC granted, from 1958 onwards, financial assistance with the object of giving a new stimulus to coal research.

The High Authority of the ECSC and, subsequently, the Commission of the European Communities have from time to time laid down guidelines for Community coal research in order to concentrate efforts on projects of interest to the Community. For example:

— Technical Research Policy and Centres of Gravity for Coal Research, published in 1963 (2),

— first medium-term coal research aid programme (1967/1968/1969),

— second medium-term coal research aid programme (1970 to 1974) (3),

— third medium-term coal research aid programme (1975 to 1980) (4).

The total amount of financial assistance granted within the terms of these programmes for technical coal research between 1958 and 1980 is about 160 million European units of account, which represents about 60 % of the total cost of the research projects in question.

The results of Community research in the field of both mining engineering and coal upgrading enabled the coal industry to achieve, during the difficult period of the 1960s and 1970s, major technical progress that could not have been made without combined efforts. The results in the areas of productivity and improved beneficiation of products

(1) OJ No C 139, 12. 11. 1974.

(2) ECSC Bulletin No 41, 1963.

(3) OJ No C 99, 31. 7. 1970; OJ No C 74, 10. 7. 1972.

(4) OJ No C 60, 25. 5. 1974.

show, moreover, the value of work carried out in collaboration with a sharing of tasks in accordance with the specializations of the Community's research institutes. These results of Community research are made available to all concerned in the Community by means of final reports on the projects, publication in the specialist technical press, symposia organized by the Commission of the European Communities, and technical films.

The research effort made by the Community up to the present time needs not only to be continued but to be reinforced in accordance with guidelines that take account of both the current energy situation and the Community's coal policy. Research projects receiving financial assistance from the Commission should meet well-defined criteria.

The energy situation in the Community and in the world at large can only deteriorate as a result of the constantly increasing price of hydrocarbons and the real possibility of a shortage of oil products. This will result in a dramatic and inevitable development of difficult economic consequences for the industrialized countries.

Faced with these facts, the Community has been invited by the European Council to take measures that will have an effect in the energy sector and, in particular, to adopt a policy of substitution for oil. The Council considers that one possible solution would be to accentuate and accelerate the development of indigenous energy resources including coal whose reserves are large and which occupies the first place in the Community.

A marked increase in coal consumption will be necessary in order to cover energy requirements that will continue to grow in the medium- and long term; numerous national and international studies have underlined the need to turn increasingly to coal in order to meet energy demand.

The position of Community coal must be strongly reinforced in the new energy scenario of the 1980s since, because of its reserves, such coal remains a real factor in the security of supply for both steel and electricity production, as well as for industry in general and the conversion of coal into liquid and gaseous hydrocarbons. Community coal should thus once again take its place in the energy market and attempt to compete with other energy sources.

The pursuit of the joint research and development efforts that are being made in the Community's coal-producing countries provides one means of regaining and strengthening the competitive position of Community coal, and hence of maintaining, or even increasing coal production, through the improvement of the results of mining operations and the achievement of the maximum upgrading of the products and by-products; these efforts should also be aimed at making the job of mining more attractive. It is for these reasons that the Commission has decided to lay down new medium-term guidelines for coal research covering the period 1981 to 1985.

The new medium-term guidelines were worked out in collaboration with the Coal Research Committee, a committee set up by the Commission of the European Communities to provide the latter with informed advice on research matters, and composed of representatives of coal producers, coal research institutes, universities and trade unions in the Community.

The aims of the new guidelines are:

— to coordinate and harmonize the research work,

— to ensure that efforts are concentrated in areas where concrete results are most likely to be achieved,

— to facilitate the selection of projects and the determination of those that are most suitable for financial support by the Commission of the European Communities.

It is clear that the objectives of coal research are the same as those of the coal industry, namely:

— to improve output and productivity, taking into account the wide variety of coal deposits,

— to improve the upgrading and utilization of the products and by-products of coal mining,

— to improve the working environment, safety and environmental protection.

The criteria taken into consideration in the choice of fields of interest, which are also those adopted for the

selection of research projects for financial support by the ECSC, are as follows:

In general:

— the objectives of the common energy policy and of the common general research policy (with particular reference to energy research),

— the interest of the research for the Community,

— the value of the research, i.e. the improvement in profitability that the mining industry can obtain from it and its effect on safety, the working environment and environmental protection without, however, neglecting fundamental research,

— the lead time between the completion of the research and its practical application.

In particular:

— the widespread application of scientific and technical results in the Community's coal mines, mechanization, automation, the utilization of computers and microprocessors, etc., being of prime importance in this respect,

— the perfecting of existing processes, techniques and technologies with a view to improving their performance and reliability, as well as the study of new equipment and installations,

— the realization of research and development projects covering an entire group of operations in underground workings and in coal preparation and processing plants without, however, neglecting the interest of particular and original projects that can make a contribution to the state of the art.

The medium-term guidelines, which are based on the objectives and criteria defined above, are given below in detail for the two major sectors of the coal industry:

I. Mining engineering

II. Product beneficiation

Reasons for the choice of fields of interest are given for each sector.

It should be noted that the demonstration projects in the field of liquefaction and gasification of solid fuels which receive financial support from the Commission under the terms of Council Regulation (EEC) No 1302/78 are separate from the technical coal research for which the Commission provides financial aid in pursuance of Article 55 of the ECSC Treaty.

A. MINING ENGINEERING

A.I. **Development work in coal and stone**

The maintenance or expansion of the Community's coal production that is necessary for the long-term security of energy supply requires the opening-up of new mines and the extension of existing ones. The consequent demands that this will place on techniques for development work in stone will necessitate appropriate and efficient systems for conventional and mechanized drivages.

The same is true for development work in seams, which must keep pace with increased extraction rates at the coal face.

In both areas, increasing emphasis must be placed on the integration of the individual operations involved in development work.

1. *Shotfiring*

— conventional drilling methods (rotary, impact, by compressed air, hydraulics, electricity),

— drilling tools,

— new drilling techniques (high-pressure water, microwaves, etc.),

— drilling vehicles,

— new explosives,

— mechanization of supports,

— loading and removal of rubble.

2. *Boom rippers*

— rock cutting methods,

— cutting heads and tools,

— profile cutting,

— control and automation,

— mechanization of supports,

— outbye services,

— auxiliary equipment,

— mechanization of face openings.

3. *Full-face heading machines*

— cutting techniques (full cross-section in one or more steps, pilot roadway drivage, enlargement, etc.),

— cutting heads and tools,

— machines for short tunnels,

— control and automation,

— mechanization of supports,

— outbye services,

— auxiliary equipment.

4. *Organization in roadway drivages*

— integration of the various operations,

— availability of machines and equipment.

5. *New techniques for breaking rock*

— drilling tools with highly intensive action,

— water jets,

— thermal and electrical methods, microwaves.

6. *Shaft sinking*

— enlargement of pilot holes,

— full-face boring,

— new support methods,

— rock cutting and loading,

— freezing techniques for great depths.

7. *Large hole boring*

— pilot holes,

— measurement of boreholes,

— rescue borings.

A.II. Methane studies, ventilation control and mine climate

The future development of coal mining will inevitably lead to operations at greater depth, involving increasing difficulties as a result of methane release and rock temperature (mine climate). The solution of these problems is of decisive importance both for mine safety and the working environment and for the trouble-free conduct of operations.

1. *Methane studies*

— prediction of de-gassing,

— control of de-gassing,

— methane drainage,

— monitoring of methane measurement and drainage,

— upgrading of mine gas.

2. *Ventilation control*

— calculation, monitoring and stabilization of main ventilation,

— calculation and monitoring of special ventilation,

— monitoring of the quantity of CO, CO_2, etc. in the atmosphere and special ventilation,

— new ventilation techniques.

3. *Mine climate*

— basic experiments,

— temperature and prediction,

— air cooling (central/local cooling installations),

— monitoring of cooling installations.

A.III. Rock pressure and supports

Here, too, it is necessary to deal with increasing difficulties from higher rock pressure as a consequence of greater depth and the occurrence of dynamic phenomena. A thorough knowledge of these phenomena should make possible improved planning of coal-mining operations, while adapted or new roof support systems in faces and roadways will improve the stability of mine workings. The favourable effects that this will have on mine safety and the conduct of operations are obvious.

1. *Rock pressure*

— basic rock mechanics,

— investigation and prediction of dynamic phenomena,

— planning data for layout and supports.

2. *Supports*

— supports and support methods in roadways and coal-winning operations (faces, roadway drivages) and in special areas (face/roadway intersections, enlargement, etc.),

— local or remote control of supports, automation,

— automated provision of permanent support,

— special situations (thick or sloping seams, etc.),

— monitoring of rock pressure and supports,

— maintenance of workings.

A.IV. Methods of working and techniques of coal-getting

Considerable progress has been made in this field in the past, as is shown to some extent by very high face outputs and good performance data for coal-winning. In the interests of improved utilization of the existing deposits it will be particularly important in the future to make the best technology that has been developed usable in seams with poorer geological conditions and to find new techniques for deposits having special conditions (steep seams, recovery of pillars, etc.). Moreover, existing work relating to increased rationalization and automation of faces must, of course, be continued.

1. *Better utilization of deposits*

— coal-winning in steep seams,

— coal-winning in extreme conditions (thin and thick seams),

— surmounting geological disturbances,

— recovery of pillars,

— adaptation to other conditions of techniques developed for high output faces,

— special techniques for difficult or unusual conditions: hydromechanical winning and transport, equipment for steep seams and thin or very thick seams.

2. *Coal-winning techniques in high output faces*

— winning machines,

— face conveyers,

— face supports,

— stowing techniques,

— control, remote monitoring, automation,

— integrated face equipment.

3. *Face ends*

— techniques for advance and in-line headings,

— ripping techniques,

— integration of various techniques and equipment at face/roadway intersections, integration with face and roadway equipment,

— mechanization, monitoring, control and automation.

A.V. Outbye operations underground

This field has taken on increased importance since it absorbs a large proportion of shifts worked underground in such a way that a corresponding part of the increased productivity at the face is lost again. Heavier demands must be made on conveying and transport systems as a consequence of the increased concentration of operations, and rapid and safe man-riding will lead to both an improved working environment and a gain in working time. Finally, as a consequence of the ever-increasing use of powered installations, the problems of maintenance and energy saving in underground operations should be studied further.

1. *Conveying of products*

— techniques: continuous and shuttle systems, diesel vehicles, hydraulic and pneumatic transport, etc.,

— control, monitoring, automation.

2. *Material transport*

— techniques: rail systems, suspended railways, trackless transport, transport of dusty material and liquids,

— transport without transfer points,

— transfer points.

3. *Man-riding*

— techniques: passenger trains, conveyer belts, railways, trackless transport, chair lifts, etc.

4. *Shaft conveying*
   - — increasing shaft capacity,
   - — overcoming problems of great depths,
   - — vertical hydraulic and pneumatic conveying.

5. *Maintenance*
   - — servicing and repair of equipment.

6. *Energy saving*
   - — electrical systems,
   - — hydraulic systems,
   - — pneumatic systems.

A.VI. Modern management techniques

The provision of a modern mine with machinery ties up so much capital that lengthy breakdowns or discontinuations of work must be avoided as far as possible. This requires reliable reconnaissance of the deposit, rapid and reliable transmission of information and data, and quick decisions on the basis of appropriate data evaluation as well as, finally, the incorporation of all previous information in forward planning. For these purposes, and in the interests of mine safety, use must be made of all modern management and monitoring techniques.

1. *Reconnaissance of deposits*
   - — interpretation of geological data,
   - — surface borings, precise determination of the type, and petrological and physico-chemical characteristics of rock strata,
   - — geophysical processes,
   - — automated data evaluation,
   - — underground borings (geophysical processes): reconnaissance over short distances, interpretation of results.

2. *Remote control, monitoring and automation*
   - — data collection, transmitters,
   - — data transmission and underground radio,
   - — remote control and monitoring, central control points,
   - — automation, process computers,
   - — mine and safety maintenance, automatic data processing,
   - — application of micrologic to mining problems.

3. *Planning and management of operations*
   - — organizational studies (planning methods, machine utilization, maintenance programmes),
   - — reliability of systems,
   - — optimization of layout,
   - — optimization of operations,
   - — short- and long-term planning.

B. PRODUCT BENEFICIATION

B.I. Mechanical coal preparation and coal transport

Research in the field of mechanical coal preparation is needed to enable the Community's mining industry to maintain and improve the quality of its products in the face of changes, brought about by developments in mining technology, in the quality of run-of-mine coal. Coal preparation techniques must be developed and adapted to deal with coal containing increasing quantities of water, fines and dirt. Improvements are needed in the conditioning of fine material and attention should be paid to the possibility of limiting the formation of additional fines. The automation of preparation plants and developments in the field of process control can contribute towards the improvement of product quality and consistency, and are of considerable interest in relation to cost savings and the elimination of arduous and unpleasant tasks;

in addition, the problem of improving the reliability of coal preparation equipment deserves investigation.

— Fundamental studies — properties of raw coal and treated products, mechanism of treatment processes.

— Stockpiling and homogenization.

— Special methods of coal transport for long and short distances.

— Improvement of conventional preparation techniques.

— Development of new techniques.

— Improved treatment and dewatering of fine material, and avoidance of formation of additional fines.

— Automatic measurement of product quality, and automation and control of the process.

— Coal desulphurization.

— Spoil dumping.

B.II. Coking of coal

It is important that coking plants, which are among the Community's main coal consumers, should be able to make the best possible use of coking coal. To this end, research should be directed towards increasing the capacity and profitability of coke ovens, widening the range of coals that can be used to make coke, maintaining or improving the quality of metallurgical coke and solving the problems of air and water pollution associated with coking plant. The important problem of blast furnace coke quality deserves special attention, and the mechanization and automation of coke oven operations is a topic of particular interest.

— Properties of coal, coal blends, coke and by-products.

— Mechanism of coking and behaviour of oven charges.

— Charge preheating and compaction, addition of binders, blending of coals.

— Development of coke ovens:

  — mechanization,

  — automation and process control,

  — productivity and thermal economy,

  — improved refractories.

— Production and upgrading of by-products.

— Gas cleaning and upgrading.

— Development of uses for coke oven gas.

— New techniques for briquetting and production of cokes from hard coal and lignite.

— Problems of environmental protection.

B.III. Combustion of coal and new techniques for coal utilization

Current energy supply conditions have given rise to a new realization that there is a need to use increasing quantities of coal for electricity generation and heat production. In order to facilitate this use, practical studies, aimed at improving the efficiency and convenience of coal-fired equipment and at reducing its capital cost, are required. Research, on a modest scale, related to increasing the efficiency of energy utilization by using coal in combined cycles for electricity generation is of special interest, and further development of small- and medium-sized coal-burning equipment is needed in order to hold existing markets for coal and to win new ones.

Environmental problems must be given special consideration in all research into coal combustion and utilization. In particular, improved methods must be developed for the upgrading of waste products such as minestone and power station fly ash.

— Studies of combustion mechanisms and processes.

— Improved efficiency of conventional combustion systems.

— Development of new systems for combustion of coal and low-grade solid fuels.

— Improved convenience of small- and medium-sized combustion equipment:

  — automatic operation,

  — improved coal and ash handling.

— Use of coal in combined cycles for electricity generation.

— Conversion of colliery spoil and fly ash into useful products.

— Control of pollutant formation and emission during combustion and methods for protection of the environment in coal utilization.

B.IV. Coal chemistry and physics and development of processes

As a result of the changing pattern of energy supply it will become increasingly necessary to turn to coal as a source of gaseous and liquid fuels and of raw materials for the chemical industry in order to provide substitutes for products that are currently made from oil. In this connection there is a continuing need for research of a basic nature, mainly on the laboratory scale, related to fundamental aspects of coal processing and conversion. There is also a requirement for such research in connection with the more traditional aspects of coal utilization. This field is also concerned with studies of a more applied nature, although still on a relatively small scale, aimed at the development of processes for upgrading the products of the coal-mining industry. As in other fields, attention must be paid to environmental problems.

— Physical and chemical properties of coal and coal products.

— Mechanism of coal processing techniques.

— Study of high-intensity chemical reactions.

— Gasification of coal to produce high- and low-calorific gases (including hydrogen).

— Solvent extraction of coal.

— Hydrogenation and hydrocracking of coal, coal extracts and coal tars.

— Manufacture of high-value carbons from coal extracts and tars.

— Manufacture of products based on chemicals derived from coal.

— Utilization of active carbon and other new materials derived from coal.

— Manufacture of special fuels and cokes from coal.

— Microbiological treatment of coal.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 11 November 1980

amending Decision 78/384/EEC concerning the duration of the programme for paper and board recycling

(80/1042/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas by its Decision 78/384/EEC (3) the Council adopted on 17 April 1978 a research and development programme for the European Economic Community in the field of paper and board recycling (indirect action) for 1978 to 1980 ;

Whereas, since it was possible to make a start on the work covered by the programme only at the end of 1978, it is necessary as a result to extend the programme by one year in order to enable the research projects to be completed and the results assessed ; whereas Decision 78/384/EEC should therefore be amended,

HAS DECIDED AS FOLLOWS :

Sole Article

Article 1 of Decision 78/384/EEC shall be replaced by the following :

'*Article 1*

For a four-year period from 1 January 1978 the Community shall carry out a research and development programme in the field of paper and board recycling as described in the Annex.'

Done at Brussels, 11 November 1980.

For the Council

The President

C. NEY

(1) OJ No C 291, 10. 11. 1980, p. 57.
(2) Opinion delivered on 29 October 1980 (not yet published in the Official Journal).
(3) OJ No L 107, 21. 4. 1978, p. 12.

European Communities — Commission

EUR 6362 — Acts published in the Official Journal of the European Communities concerning Community scientific and technical research

Scientific and Technical Research Committee (CREST)

Luxembourg: Office for Official Publications of the European Communities

1981 — X, 270 pp. — 21.0 × 29.7 cm

Science and technology policy series

DE, DA, EN, FR, IT, NL

ISBN 92-825-2398-5

Catalogue number: CD-NW-81-002-EN-C

Price (excluding VAT) in Luxembourg:

ECU 18 BFR 750 IRL 12.50 UKL 9.80 USD 21.30

This document was drawn up at the request of various delegations to the Scientific and Technical Research Committee (CREST). It incorporates all the decisions, communications or resolutions of the Community authorities relating to scientific research and technological development which have been published in the Official Journal of the European Communities since 1 January 1974.

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ISBN 92-825-2398-5

L-2985 Luxembourg

Catalogue number: CD-NW-81-002-EN-C